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UNITED STATES DEPARTMENT OF AGRICULTURE

DEPARTMENT BULLETIN No. 1442

Washington, D. C. ▼ November, 1926

MARGINS, EXPENSES, AND PROFITS IN RETAILING MEAT

By

KELSEY B. GARDNER, Associate Economic Analyst
Bureau of Agricultural Economics

CONTENTS

	Page
Collection and Nature of Data	2
Methods of Analysis and Presentation of Data	10
Margins and Expenses in Individual Retail Meat Markets	12
Profit in Individual Retail Meat Markets	27
Total Returns to Proprietors of Individual Retail Meat Markets	31
Retail Meat Stores with Annual Sales Volumes of Less Than $14,000	33
Sales per Employee	34
Margins, Expenses, and Profits Compared for 1923 and 1924	38
Wages Paid to Cutters	40
Comparison of Margins, Expenses, and Profits with Results of the Chicago, Cleveland, and New York Survey	40
Comparison of Margin, Total Expense, and Profit in Individual Retail Meat Markets for 1919 and 1923–24	42
Stock Turn	45
Equipment Investment	46
Semiwholesale Straight Meat Markets	46
Combination Stores	48
Retail Chain Stores	49
Semiwholesale and Retail Chain Meat Markets	50
Summary	54

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CONTENTS

	Page
Collection and nature of data	2
Types of stores	3
Definitions of terms	5
Methods of analysis and presentation of data	10
Margins and expenses in individual retail meat markets	12
Ownership	12
Relative importance of items of expense	12
Gross margins	13
Total expense	17
Salaries and wages	17
Rent	18
Wrappings	19
Refrigeration	19
Light and power	20
Depreciation	20
Other expense	20
Delivery expense	24
Margins, expenses, and profits by sections	26
Profit in individual retail meat markets	27
Total returns to proprietors of individual retail meat markets	31
Retail meat stores with annual sales volumes of less than $14,000	33
Sales per employee	34
Margins, expenses, and profits compared for 1923 and 1924	38
Wages paid to cutters	40
Comparison of margins, expenses, and profits with results of the Chicago, Cleveland, and New York survey	40
Comparison of margin, total expense, and profit in individual retail meat markets for 1919 and 1923–24	42
Stock turn	45
Equipment investment	46
Semiwholesale straight meat markets	46
Combination stores	48
Retail chain stores	49
Straight meat markets	49
Combination chain stores	50
Semiwholesale and retail chain meat markets	50
Packer-owned retail markets	51
Packer-owned semiwholesale markets	52
Summary	54

Retail costs of meat distribution are of interest to the producer of livestock, to the various agencies engaged in the preparation and sale of meat, and to the consumer of meat. The increased spread observed in postwar years between prices received by livestock producers and prices paid by consumers of meat and meat products renders the subject of especial interest at this time.

[1] A survey of the retail marketing of meat was provided for by Congress in the act making appropriations for the United States Department of Agriculture for the fiscal year 1924–25. Further appropriation for this work was provided for the year 1925–26. The survey was divided into three parts: (1) Methods and practices; (2) margins, expenses, and profits; and (3) consumer habits and preferences in the purchase and consumption of meat. A study of these factors and their influence upon the market for meat constituted the general plan as a whole. The second part relating to margins, expenses, and profits is covered in this bulletin. The first part of the study is reported in Department Bulletin No. 1441 and the third part in Department Bulletin No. 1443.

The collection of data in the field was done by Edward B. Ballow, Henry F. Buchanan, Frank E. Manning, and Robert M. Roudabush. Christine R. Beard and Avis B. Damon assisted in the tabulation of data and compilation of results.

Since the portion of the retail price of meat absorbed by retail agencies usually averages between 22 and 25 per cent, attention is directed toward retailers as a result of the size of this margin. Another cause for the focus of attention upon the retail distributor of meat is the fact that in this phase of distribution the effect of the disproportionate demand for various cuts of meat becomes most pronounced through the wide differences in price. The difference between prices paid to producers of livestock and prices paid by consumers for the more favored cuts is marked, and questions regarding retail costs and profits of operation are the result.

As information regarding operating costs and profits of retail meat dealers was desirable before answers in whole or in part could be made to these questions, provision was made for the study here reported.

COLLECTION AND NATURE OF DATA

The field work connected with the margins, expenses, and profits portion of the survey of retailing meat was begun in July, 1924, and was completed in May, 1925. Collection of cost data and related facts was carried on in 16 cities distributed throughout the United States. These cities were: Bridgeport and New Haven, Conn.; Binghamton, N. Y.; Baltimore, Md.; Washington, D. C., Lincoln, Nebr.; St. Paul and Minneapolis, Minn.; Oklahoma City, Okla.; New Orleans, La.; Birmingham, Ala.; Jacksonville, Fla.; Denver, Colo.; Cheyenne, Wyo.; Seattle, Wash.; and San Francisco, Calif. In addition, data were obtained from chain-store units located in a few other cities and towns in connection with the collection of chain-store data.

For the year 1923, data were obtained from 142 individual retail straight meat markets, 9 semiwholesale markets, 15 units of chain-store systems selling meat at retail in straight meat markets, 20 units of semiwholesale straight meat chains, 14 individual combination stores which sold both meats and groceries, and from 26 units of combination retail chains, selling both meats and groceries.

For 1924, figures were obtained from 111 individual straight meat markets, 9 semiwholesale straight meat markets, 18 units of retail straight meat-chain systems, 20 units of semiwholesale straight meat-chain systems, and from 8 units of combination retail chain systems, which sold both meats and groceries.

In 74 of the 111 individual straight meat markets from which data were obtained for 1924, figures were also obtained for 1923. This permitted comparison between the results of 1923 and 1924 operations in the same stores. Data for both years were obtained for some of the stores in the other groups, but the number was limited. Accordingly, no comparisons between the two years for these stores are presented.

No figures were obtained in Chicago and New York. Since these cities were included in a study for the year 1923 conducted by the United States Department of Agriculture in cooperation with Northwestern University.[2] Comparison was made between the results

[2] Results of this survey were published in a mimeograph report of the Bureau of Agricultural Economics, U. S. Dept. Agr.: "Margins, Expenses, and Profits in the Retail Meat Trade, Chicago, Cleveland, and New York, Mar., 1923, to Feb., 1924."

of the present study and the results from the survey of 143 stores located in Chicago, Cleveland, and New York, thus extending the scope of the department's study of retail meat costs for 1923 to include a total of 285 individual retail straight meat markets.

A table showing the number of individual retail meat markets from which accounting data were procured for the years 1923 and 1924 is given on page 53. In this table the markets are classified by city, sales volume, and class of service.

In addition to the 1923 survey of Chicago, Cleveland, and New York meat markets, the department had previously conducted both a nation-wide survey for the year 1919 [3] and a local survey for the year 1921 in five cities of Wisconsin.[4] The Wisconsin survey was localized in character and no attempt was made to relate 1923–1924 conditions to this study. An attempt was made to relate the results of this study to those obtained in the 1919 survey, which was based on conditions existing immediately following the close of the war, to determine, if possible, the extent of any adjustments which may have been made in the cost of retailing meat during the period between the 1919 survey and the present survey of 1923 and 1924 conditions.

Collection of the data was directed toward obtaining a representative group of stores from each city. Because of the lack of a uniform system of records in stores engaged in the retailing of meat, it was necessary for department representatives to visit, and in many instances, to carry out detailed examination of the records of the various stores. The records kept by the dealers were carefully examined, and in some markets where records were kept in a disorganized manner the accountants made what amounted to audits of the financial operations of the business in order to obtain data which might be of use.

So far as practicable, data were obtained from all types of stores. It is believed that, with the exception of meat departments in department stores, this result was accomplished. That the subsequent discussion may be clear, the types of stores and the basis of their classification are presented herewith.

TYPES OF STORES

STRAIGHT MEAT MARKETS

Straight meat markets rarely occurred except as stalls in public markets. In general it was found that "straight meat markets" sold not only meat and meat products but also other foods, such as poultry, fish, game, canned meats, canned goods, butter, eggs, fruits, and vegetables. Since meat markets, with relatively few exceptions, sold one or more of these additional merchandise lines, it was necessary to include stores with small proportions of these merchandise side-lines and to regard them as straight meat markets.

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[3] U. S. Dept. Agr., Dept. Bul. No. 1317; RETAIL MARKETING OF MEATS. MARSHALL, HERBERT C. 86 pp. illus. 1925.

[4] U. S. Dept. Agr., Bur. Agr. Economics, mimeograph report: "A Study of the Retail Meat Trade in Five Wisconsin Cities, 1921."

STALLS IN PUBLIC MARKETS

In some of the cities a considerable number of such meat stalls in public markets were encountered—so many that they were important factors in the retail distribution of meat in their localities. In general these stalls more nearly approached a straight meat and meat-products distribution agency than any other type of retail meat distributor.

COMBINATION STORES

Stores classified as combination stores were usually those having meat and grocery departments. Numerically, this type of store was very important. Practically, it was difficult to obtain reliable figures from any considerable number of them, since they did not departmentize their businesses to the extent that costs and profits could be determined separately for the several departments. In some instances such data were available, but it was generally found that separate records for each department were not kept in combination stores.

CHAIN STORES

The chain systems studied in this survey consisted of two general types: (1) A number of straight meat markets under one ownership, engaged in the retail, or partly retail and partly wholesale, distribution of meat, and (2) a group of stores of the combination type having both grocery and meat departments, all under one management and ownership.

CLASSIFICATION ACCORDING TO SERVICE RENDERED

In addition to this classification by types, the group of individual stores, or unit stores as they are sometimes called in contrast to chain-store systems, was subdivided according to the services which they were prepared to furnish customers. The usual classifications of stores according to services rendered were: (1) Cash-and-carry, (2) cash-and-delivery, (3) credit-and-carry, (4) credit-and-delivery. The predominant types of retail meat markets were the cash-and-carry stores and the credit-and-delivery stores. The other service combinations of cash-and-delivery and credit-and-carry were relatively of slight numerical importance in this survey.

In each store the proprietor was asked to estimate the proportions of his total business which he believed to be cash or credit, carry or delivery. After the data were gathered from all the stores an examination indicated that if the various stores were divided between carry-and-delivery groupings and the delivery group subdivided as to whether the store maintained its own delivery facilities, the entire group of stores fell into three classifications: (1) The carry group which consisted of cash-and-carry stores, (2) the limited-delivery group which included stores generally using contract or central-delivery systems, and (3) the unlimited-delivery groups which included stores owning and operating delivery facilities.

A uniform profit-and-loss statement was prepared for each store, and certain additions to the expenses shown on the books were added

in order that proper comparison might be made between stores. It was necessary to adopt a uniform classification of accounts and definition of terms.

DEFINITIONS OF TERMS

NET SALES

The net-sales item was the total of all receipts from sales of merchandise less any allowances or discounts made to customers. Receipts from sales of fats, bones, hides, containers, and other items connected with the retailing of meat were included. The net-sales amount formed the basis for the calculation of the various percentages shown as margins, expense, profits, and losses since these items are shown as percentages of net sales.

COST OF GOODS SOLD

All expenditures for goods actually sold were included in cost of goods. This figure was determined by adding to the value of the inventory of stock on hand at the opening of the period for which the cost of goods was to be determined the total purchases of goods made during the period, and subtracting from this combined total the value of the inventory at the close of the period, together with allowances and discounts received on purchases, plus the cost of goods used by the proprietor and family, plus any goods given to employees. The resulting amount was the cost of goods actually sold during the period.

GROSS MARGIN

The difference between net sales and cost of goods sold was the gross margin, sometimes called the gross profit. Out of this margin the dealer paid his expenses of operation before realizing a profit.

TOTAL EXPENSE

Total expense was composed of salaries, wages, rent, wrappings, refrigeration, light and power, depreciation, telephone, laundry, bad debts, advertising, insurance, taxes, repairs, delivery expense, and various items of unclassified expense. The amount as used in this survey was larger in most instances than that usually regarded as total expense by retail meat dealers. This fact arose from the including of certain items which were not always recognized by retailers as expenses. The chief of these items were proprietor's salary, wages of a partner or partners or of any member or members of the proprietor's family who were engaged in the business, rent on buildings owned by the business and used in the conduct of the business, and depreciation on shop, office, and delivery equipment. Interest on investment was not included as an expense.

PROFIT

From gross margin must be deducted total expense before a profit is realized. It is obvious that the gross margin must at least be equal to total expense if the business is not to be operated at a loss. Thus any amount remaining after the deduction of total expense

from gross margin represented profit accruing from the operation of the business. In this study the profit figure included not only the profit above estimated wages of the proprietor but also interest on investment. In this connection investment consisted of amounts invested in equipment and stock, cash used in the business, and the difference between average amounts owed to the business for goods sold on credit and amounts owed by the business on credit purchases of merchandise. No building investments were included, since allowance had been made for these items through the setting up of estimated rentals in those cases where the buildings occupied by the business were also owned by the business.

It should be made clear in connection with this definition of profit that in those cases where a loss is shown the proprietor was credited with an estimated salary and rent in the case of an owned building, so that where a loss was indicated the proprietor may not have had an actual out-of-pocket loss, but rather failed to meet entirely the estimated wage and rent prevailing for stores of similar class and situation.

SALARIES AND WAGES

Salaries and wage amounts consist of (1) amounts actually paid to employees other than the proprietor or members of his family, and (2) estimated wages for the proprietor and members of his family in those cases where the amounts allowed by the proprietor were not in agreement with the prevailing rates of payment for similar services in the locality. The determination of the amount of salaries and wages paid to full-time or part-time employees of the business presented no particular difficulty. However, the second portion of the salary and wage expense, that of estimated salary and wages for the proprietor and family was of special importance. This arose from the fact that the widest possible variations were observed in the methods of treating this item of expense. It was desirable, therefore, to adopt some uniform method of procedure which would render comparable the salary and wage expense in various stores.

The primary consideration in setting up such a wage was that the amount so determined should not be in excess of the amount necessary to hire an employee to perform the routine duties involved. In other words, the method of determining the proprietor's wage should not result in the including of any portion of the profit which might accrue to him as owner of the business. It seemed reasonable to believe that the proprietors of the smaller shops should receive from their business a wage amount at least equal to the usual salary paid meat cutters in the immediate locality. It further appeared reasonable to assume that up to an annual volume of sales of $20,000 the usual wage paid cutters should be an adequate wage for the proprietor.

Accordingly the basis of estimating a wage for the proprietors of stores whose annual volumes of sales were $20,000 or less was to include as proprietor wage expense amounts equal to the usual wages paid meat cutters in the locality. In stores where the annual sales volumes were between $20,000 and $100,000, the basic wage for cutters was allowed for the first $20,000 volume of sales and an

amount equal to 1.75 per cent of sales was added for any excess over $20,000 and up to a total volume of business of $100,000 yearly. For stores in which the sales volumes were in excess of $100,000, an additional 0.75 per cent of the excess was added in estimating the proprietor's wage. When these methods of determining proprietors' wages were applied to varying volumes of sales, a wage of $1,820 per year was estimated for the proprietor of a $20,000 business, when the usual wage for cutters in the locality was $35 per week. Under similar circumstances the proprietor wage in a store where the annual business was $50,000 was found to be $2,345 per year and the wages of a proprietor of a $100,000 business were estimated at $3,220 annually.

Estimated wages of the proprietors of retail markets of varying sales volumes and in different cities are presented in Table 1. These wage amounts applied only in those instances where the proprietors devoted their entire time to the conduct of their businesses.

TABLE 1.—*Proprietor wages estimated for businesses of varying size*

Annual volume of sales	Total annual estimated wage of proprietor based on cutter wage per week of— [1]				Annual volume of sales	Total annual estimated wage of proprietor based on cutter wage per week of— [1]			
	[2] $25	[3] $30	[4] $35	[5] $40		[2] $25	[3] $30	[4] $35	[5] $40
$20,000 or under	$1,300	$1,560	$1,820	$2,080	$120,000	$2,850	$3,110	$3,370	$3,630
$40,000	1,650	1,910	2,170	2,430	$140,000	3,000	3,260	3,520	3,780
$60,000	2,000	2,260	2,520	2,780	$160,000	3,150	3,410	3,670	3,930
$80,000	2,350	2,610	2,870	3,130	$180,000	3,300	3,560	3,820	4,080
$100,000	2,700	2,960	3,220	3,480	$200,000	3,450	3,710	3,970	4,230

[1] Each wage amount is based on the weekly cutter wage at the head of the corresponding column. Percentage amounts of sales in stores where the annual sales were over $20,000 were computed in accordance with the methods described on page 6.

[2] Cutter wages in New Orleans, $25 per week.

[3] Cutter wages in Bridgeport and New Haven, $30 per week.

[4] Cutter wages in Baltimore, Binghamton, Birmingham, Cheyenne, Denver, Jacksonville, Lincoln, Minneapolis, St. Paul, and Washington, $35 per week.

[5] Cutter wages in San Francisco and Seattle, $40 per week.

Prior to the inauguration of the study, these methods of estimating proprietors' wages were referred to representative men in the retail-meat industry to determine whether the estimated wages were reasonable. During the course of the study numerous opportunities were found to compare the estimated wages allowed for proprietors of markets with various volumes of business with amounts paid managers of stores of the same sales volumes. In most instances, a very close agreement was noted so that the validity of the amounts determined by these methods of estimate may be regarded as sufficiently well established for wage conditions which existed during the period covered by the survey. Any material changes in the wage scale or in the retail prices of meat will render the percentages used of little value under the changed conditions.

In partnerships, a single partner was regarded as the proprietor and the remaining member or members of the firm were allowed a salary equal to the prevailing wage for the services performed. In corporations, the amounts withdrawn as salaries by officers of the corporation were analyzed to determine whether they were in agree-

ment with the estimated salaries of a privately operated business of the same size. This procedure was necessary since in most retail meat corporations the ownership was so restricted that the amounts paid the officers as salaries might be regarded as a combination of salaries and withdrawals of profits.

Amounts paid members of the proprietor's family, who were engaged in the business, were analyzed to determine whether they were in agreement with the usual wages paid nonmembers for similar services. If not, the amount actually paid was disregarded and an estimated wage equal to the usual wage for such services was incorporated in the profit-and-loss statement.

The value of any free meat or meals given to employees was added to the amount paid as wages to determine the total wage amount paid to employees.

RENT

Rent included the amount paid as rent for the space occupied by the market. In the case of an owned building, an estimated rental was incorporated in the profit-and-loss statement. Garage or stable rent was included in "other delivery expense."

WRAPPINGS

The expense item for wrappings included outlays for paper, bags, other containers, and twine.

REFRIGERATION

In those markets where ice was the means of refrigeration the amount for refrigeration included expenditures for ice and a depreciation allowance on ice boxes. Where an ice machine was used, this item included not only depreciation on the ice box but also depreciation on the refrigeration machine and, in so far as it was possible to obtain them, the various expenses incurred in the operation of the machine, that is, power, water, ammonia, repairs, etc.

LIGHT AND POWER

Expenditures for light and for power used in the operation of grinding, slicing, and other machines, with the exception of the refrigeration machine, were included under the heading of light and power expense.

DEPRECIATION

An annual depreciation rate of 10 per cent was used on all shop and office equipment. A rate of 25 per cent per year was applied to motor delivery equipment and this amount included in "other delivery expense." The item of depreciation appearing in the discussion, therefore, does not include depreciation on delivery equipment or depreciation charged on ice boxes and ice machines.

DELIVERY EXPENSE

The delivery expense item included expense incurred in the maintenance of delivery service. It was divided into "delivery wages,"

and "other delivery expense." In the larger stores where the time of certain employees was devoted entirely to delivery service, determination of delivery wages was not particularly difficult. But in the smaller stores, where an employee or the proprietor spent only a portion of his time in delivery and the remainder of his time at some other activity of the business, an estimate was obtained of the portion of his time spent in delivery service and this portion of the wage was charged to delivery. "Other delivery expense" consisted of those items other than wages which were incurred in the maintenance of delivery facilities. The more important of these expenses were gas, oil, repairs, garage or stable rent, horseshoeing, repairs to vehicles, insurance, taxes, and allowances for depreciation on horses, harness, wagons, and automobiles.

Where delivery equipment was not maintained by the store and a central delivery system or some form of contract delivery was used, the total expenditure for delivery has been shown as total delivery expense, since no further analysis was possible.

OTHER EXPENSE

It was not always possible to analyze completely the miscellaneous expense items contained in the records of various meat markets. The analyses in these instances were made as complete as possible, but the accountants were unable to determine the amounts of each item of miscellaneous expense included in the miscellaneous grouping for all stores. Therefore, in the presentation of the data, "other expense" was analyzed separately and the number of stores reporting each item of expense shown, so that the significance of the various items was maintained. The items entering into "other expense" were as follows:

Telephone.—No explanation is required for telephone expense, as the meaning of this item of expense is clear.

Laundry.—The meaning of the laundry account is obvious.

Bad debts.—The bad-debt loss consists of the accounts which dealers reported as uncollectible. No attempt was made to analyze all accounts receivable or to determine a bad-debts allowance in those cases where dealers reported all accounts as good.

Advertising.—Expenditures for advertisements in local papers, special novelties, handbills, and other forms of advertising were included in the item of advertising expense.

Insurance.—Insurance premiums on stock and equipment (other than delivery equipment) were the basis for the item of insurance expense. Insurance on buildings owned and occupied by the business was not included, since adequate allowance for this item was made in the estimated rental.

Taxes.—Taxes on stock and equipment (other than delivery equipment) constituted the tax expenditure, but Federal income taxes and taxes on buildings owned and occupied by the business were not included.

Repairs.—Repairs to equipment (other than refrigeration and delivery equipment) were included in this item of expense.

METHODS OF ANALYSIS AND PRESENTATION OF DATA

Straight meat markets, whose restaurant and other wholesale trade amounted to 30 per cent or less of their total business, were classified as retail markets, since they were dependent to a large extent upon their retail operations for their volumes of business. As a matter of fact, very few stores whose volumes of restaurant or wholesale sales were greater than 15 per cent of total business were included in the retail group.

An examination of the gross margins and operating expenses indicated that stores whose restaurant or wholesale trade amounted to not more than 30 per cent of their total business showed very little variation from stores reporting a much smaller percentage of wholesale business. The proportions of wholesale and retail business were proprietors' estimates, so that in deciding upon the validity of these estimates, expense, together with gross margin, was of significance in locating errors in the estimates.

The major portion of the data was obtained from stores of the individual straight meat-market type. In so far as possible, figures were obtained from stores of other types such as combination stores and chain stores operating in the areas of study. No special effort was made to gather together a body of chain-store data other than from chain stores operating in the 16 cities where the cost study was carried on. The data collected, therefore, were largely from individual retail meat establishments. This being the case, the analysis was concerned primarily with individual retail straight meat markets. Whenever possible, however, comparisons between stores of this type and other types are made.

Analysis of the individual retail meat-market data was directed along five general lines: (1) Determination of the elements of cost and their relative importance in the expense of conducting a retail meat establishment, (2) effect of volume on operating costs, (3) separation of the markets according to classes of service rendered and the resulting variations in cost, (4) determination of the differences in operating expense between various sections of the country, (5) discovery of any factors or conditions within the market which influenced profits.

For the purpose of analysis, the individual retail meat markets were divided into three classifications: (1) Carry stores, (2) limited-delivery stores, and (3) unlimited-delivery stores. In the carry group the stores were predominantly cash-and-carry, so that this group may be regarded as a cash-and-carry group. The delivery group was subdivided into two classifications which were based on the type of delivery service rendered. On the basis of classification, the limited-delivery group might well have been called a limited-service group, and the unlimited-delivery group might have been called an unlimited-service group.

The limited-delivery subdivision was made because stores falling within this classification were not predominantly service stores. Extension of credit by these markets was limited, in most instances, and the delivery service rendered was confined to deliveries made through the medium of a contract delivery or a central-delivery system. Under no basis of classification could they have been considered as belonging to the general group of unlimited service stores.

In the collection of data, efforts were made to obtain records from representative stores of varying sizes in each locality. Attention was given to the proportions in which stores of the various types occurred. In so far as data were made available by dealers who desired to cooperate in the study and whose records were adequate for the purposes of the survey, it is believed that a representative sample for each of the four sections of the country was obtained. It was not the intention to set up general averages which might be used in discussing the retail distribution for the country as a whole, but rather to analyze the variations in the cost of services and to discover, if possible, elements of efficiency and inefficiency in retail meat-market management.

The analysis was based on the 1923 figures rather than on the 1924 figures, since the number of stores from which data were obtained in 1923 was larger than for 1924. Field work was begun in July, 1924, and work in several cities was completed before 1924 data were available. Figures for 1924 were used in pointing out the margin, expense, and profit relations existing in identical stores for the two years 1923 and 1924, thereby extending the scope of the survey to include not only the year 1923 but also the year 1924.

In all tables, unless otherwise stated, the results refer to stores in which the annual volumes of sales were $14,000 and over. Figures for the year 1923 were obtained from 13 stores in which net sales were under $14,000 and in 10 of these stores losses were incurred, when estimated wages were set up for the proprietors. On the basis of data collected in this survey and in other surveys conducted by the Department of Agriculture, it hardly seems possible for the proprietors of these very small-sized shops to make wages equal to those received by meat cutters. Since the analysis of the data was directed toward determining conditions which resulted in profit and loss, and over which the management may be said to have control, the group of stores in which net sales fell below $14,000 were eliminated for the most part from the discussion and groups of data.

In a part of the analysis of sales per employee in individual retail meat markets, the data were restricted to the unlimited delivery stores in which net sales volumes were between $14,000 and $100,000 annually. This group of stores seemed to be sufficiently representative to form the basis for a more detailed study of annual sales per employee.

TABLE 2.—*Ownership of 142 individual retail meat markets by class and size of store, 1923*

Annual volume of sales	Carry stores			Limited-delivery stores			Unlimited-delivery stores		
	Individually owned	Partnership	Corporation	Individually owned	Partnership	Corporation	Individually owned	Partnership	Corporation
Less than $14,000	9			3			1		
$14,000–$25,000	7	1		4	1		5		
$25,001–$50,000	13	3	1	9	3		16	3	
$50,001–$100,000	5	3		5	3		20	8	1
Over $100,000	2		3	3	1	2	6	1	
Total	36	7	4	24	8	2	48	12	1

MARGINS AND EXPENSES IN INDIVIDUAL RETAIL MEAT MARKETS

OWNERSHIP

The 142 individual ownership retail meat markets from which data for the year 1923 were obtained, when arranged by type of store and by kind of ownership, were found to be grouped as indicated in Table 2. The predominating type of ownership was the single proprietorship. Of a total of 47 carry stores, 36 were individually owned. Of 34 limited-delivery stores, 24 were individually owned and 48 stores from a total of 61 unlimited-delivery stores were found to be owned by single individuals.

When the number of stores of each form of ownership was expressed as a percentage of the total number of stores of each type, it was found that 77 per cent of the carry stores, 71 per cent of the limited-delivery group and 79 per cent of the unlimited-delivery markets were owned by individuals.

The partnership grouping was next in significance. In the carry group, 15 per cent of the stores were owned by two or more partners, and 23 per cent of the limited-delivery stores and 20 per cent of the unlimited-delivery group were partnerships. The corporate form of ownership was least important in this group of 142 unit retail meat stores. Eight per cent of the carry stores, 6 per cent of the stores in the limited-delivery group and 1 per cent of those in the unlimited-delivery group were incorporated.

RELATIVE IMPORTANCE OF ITEMS OF EXPENSE

The relative importance of the various items of expense in individual retail meat markets for the year 1923 is presented in Table 3 as percentages of total expense. The outstanding expense was incurred for salaries and wages, which averaged for all stores 64.04 per cent of total expense. No great variations were noted among the various classes of stores. This single expense, which included an estimated wage for the proprietor, was thus almost two-thirds of total expense.

TABLE 3.—*Items of expense as percentages of total expense in individual retail meat markets, 1923*

Item	All stores	Carry stores	Limited-delivery stores	Unlimited-delivery stores
Salaries and wages	64.04	64.13	63.90	64.01
Rent	10.60	12.72	11.97	8.64
Wrappings	4.72	5.47	5.14	4.06
Refrigeration	4.87	5.67	4.47	4.58
Light and power	1.61	1.52	1.73	1.62
Depreciation	2.04	2.33	2.12	1.81
Other expense (total)	12.12	8.16	10.67	15.28
Delivery wages [1]				8.88
Other delivery expense [2]				6.44
Total delivery expense [3]			4.95	15.32
Total expense [4]	100.00	100.00	100.00	100.00

[1] Also included in salaries and wages.
[2] Also included in other expense (total).
[3] See footnotes 1 and 2.
[4] Exclusive of interest.

Rent averaged 10.60 per cent of total expense for stores of all classes. Wrapping expense averaged 4.72 per cent of total expense for all stores but was noticeably more important in relation to total expense in carry and limited-delivery stores.

Refrigeration approximated wrappings in relative importance. Light and power (exclusive of power used for refrigeration) varied but little between the groups of stores from the 1.61 per cent average of all stores. Depreciation on equipment, other than that used for delivery or refrigeration, averaged 2.04 per cent for all stores.

Other expense averaged 12.12 per cent of the total expense for all stores, 8.16 per cent for carry stores, 10.67 per cent for limited-delivery, and 15.28 per cent for unlimited-delivery stores. These increases in other expense in the limited and unlimited-delivery stores were occasioned by the including of delivery expense exclusive of wages. Further analysis of other expense is not shown either because each item of this expense was not incurred by all stores or because the records would not permit of its being segregated, so that averages for each minor item entering into other expense can not be shown.

GROSS MARGINS

The average gross margin for individual retail meat stores of all sizes and types for 1923 was 23.56 per cent of net sales. In Table 4 are presented the gross margins for stores classified by character of services rendered, profit and loss, and volumes of sales groupings. The average gross margin for carry stores was 22.98 per cent, and the corresponding figure for the limited-delivery group was slightly larger, being 23.09 per cent. The unlimited-delivery group average gross margin was 24.18 per cent, an increase of 1.2 per cent over that of the carry group.

TABLE 4.—*Gross margins, expenses, and profits in individual retail meat markets, 1923*

[Amounts expressed in percentage of net sales]

Arranged by class of service, profit and loss groups, and annual volumes of sales	Number of stores	Net sales	Cost of goods	Gross margin	Profit [1]	Total expense [2]	Salaries and wages	Rent	Wrappings	Refrigeration	Light and power	Depreciation	Other expense [3]	Delivery expense [4]		
														Wages	Other	Total
Carry stores:																
Profit group—																
$14,000–$25,000	6	100	79.14	20.86	3.40	17.46	12.03	1.66	1.04	1.13	0.25	0.35	1.00			
$25,001–$50,000	15	100	76.15	23.85	5.07	18.78	11.96	2.40	1.08	1.20	.29	.48	1.37			
$50,001–$100,000	5	100	76.49	23.51	3.67	19.84	13.56	1.78	.95	1.01	.32	.36	1.86			
Over $100,000	5	100	76.79	23.21	4.09	19.12	11.34	2.85	1.15	.81	.24	.62	2.11			
All profit stores	31	100	76.89	23.11	4.36	18.75	12.13	2.23	1.07	1.09	.28	.46	1.49			
Loss group—																
$14,000–$25,000	[5] 2	100	73.94	26.06	−2.44	28.50	19.56	3.44	.91	2.04	.66	.62	1.27			
$25,001–$50,000	[5] 2	100	74.52	25.48	−2.25	27.73	16.09	4.31	1.36	.95	.28	.64	4.10			
$50,001–$100,000	[5] 3	100	82.10	17.90	−.86	18.76	11.19	3.65	1.18	.82	.23	.30	1.39			
All loss stores	7	100	77.60	22.40	−1.71	24.11	14.98	3.78	1.15	1.21	.37	.49	2.13			
Profit and loss combined—																
$14,000–$25,000	8	100	77.84	22.16	1.93	20.23	13.91	2.11	1.01	1.36	.35	.42	1.07			
$25,001–$50,000	17	100	75.96	24.04	4.21	19.83	12.44	2.62	1.12	1.17	.29	.50	1.69			
$50,001–$100,000	8	100	78.59	21.41	1.97	19.44	12.67	2.48	1.04	.94	.29	.34	1.68			
Over $100,000	5	100	76.79	23.21	4.09	19.12	11.34	2.85	1.15	.81	.24	.62	2.11			
All carry stores	38	100	77.02	22.98	3.24	19.74	12.66	2.51	1.08	1.12	.30	.46	1.61			
Limited-delivery stores:																
Profit group—																
$14,000–$25,000	1	100	81.85	18.15	.66	17.49	8.46	1.12	1.14	.84	.25	1.39	4.29			3.60
$25,001–$50,000	9	100	76.08	23.92	3.73	20.19	12.81	2.53	1.05	.97	.34	.43	2.06			.82
$50,001–$100,000	7	100	75.43	24.57	3.31	21.26	13.63	2.96	1.10	.96	.28	.39	1.94			.54
Over $100,000	6	100	75.33	24.68	3.85	20.83	12.51	3.25	1.12	.76	.34	.34	2.51			.36
All profit stores	23	100	75.93	24.07	3.50	20.57	12.79	2.78	1.08	.91	.32	.44	2.25			.74
Loss group—																
$14,000–$25,000	4	100	79.62	20.38	−1.21	21.59	14.21	1.96	1.04	1.30	.55	.46	2.07			2.38
$25,001–$50,000	[5] 3	100	79.94	20.06	−1.49	21.55	15.36	1.51	1.01	.74	.36	.45	2.12			1.81
$50,001–$100,000	1	100	79.50	20.50	−.14	20.64	15.04	.87	1.00	.73	.40	.29	2.31			.10
All loss stores	8	100	79.73	20.27	−1.18	21.45	14.75	1.65	1.02	1.01	.46	.44	2.12			1.88

Profit and loss combined—																
$14,000–$25,000	5	100	80.07	19.93	−.84	20.77	13.06	1.79	1.06	1.21	.49	.65	2.51	-------	-------	2.62
$25,001–$50,000	12	100	77.04	22.96	2.43	20.53	13.44	2.27	1.04	.91	.34	.44	2.09	-------	-------	1.07
$50,001–$100,000	8	100	75.94	24.06	2.87	21.19	13.80	2.70	1.08	.93	.30	.38	2.00	-------	-------	.49
Over $100,000	6	100	75.32	24.68	3.85	20.83	12.51	3.25	1.12	.76	.34	.34	2.51	-------	-------	.36
All limited-delivery stores	31	100	76.91	23.09	2.29	20.80	13.29	2.49	1.07	.93	.36	.44	2.22	-------	-------	1.03
Unlimited-delivery stores:																
Profit group—																
$14,000–$25,000	2	100	72.76	27.24	1.18	26.06	17.27	2.14	1.09	1.88	.23	.56	2.89	3.29	.96	4.25
$25,001–$50,000	16	100	73.49	26.51	6.04	20.47	13.51	1.73	.79	.87	.40	.28	2.89	2.03	1.20	3.23
$50,001–$100,000	23	100	75.63	24.37	4.28	20.09	12.92	1.63	.86	.84	.31	.37	3.16	1.55	1.18	2.73
Over $100,000	6	100	75.51	24.49	5.77	18.72	12.12	1.51	.68	.82	.21	.26	3.12	1.66	1.45	3.11
All profit stores	47	100	74.76	25.24	4.94	20.30	13.20	1.67	.82	.89	.33	.33	3.06	1.80	1.22	3.02
Loss group—																
$14,000–$25,000	3	100	77.68	22.32	−5.73	28.05	16.13	3.93	1.03	2.16	.49	.76	3.55	3.32	2.45	5.77
$25,001–$50,000	3	100	76.40	23.60	−3.38	26.98	17.06	2.01	1.05	.88	.61	.52	4.85	1.96	2.40	4.36
$50,001–$100,000	[5] 6	100	81.25	18.75	−1.23	19.98	12.71	1.65	.90	.91	.22	.39	3.20	1.82	1.47	3.29
Over $100,000	1	100	85.54	14.46	−3.31	17.77	8.66	2.03	.89	1.21	.40	.86	3.72	.10	.66	.76
All loss stores	13	100	79.64	20.36	−2.93	23.29	14.19	2.29	.97	1.22	.38	.54	3.70	2.07	1.85	3.92
Profit and loss combined—																
$14,000–$25,000	5	100	75.71	24.29	−2.96	27.25	16.58	3.22	1.05	2.05	.38	.68	3.29	3.30	1.86	5.16
$25,001–$50,000	19	100	73.95	26.05	4.56	21.49	14.07	1.77	.83	.87	.43	.32	3.20	2.02	1.39	3.41
$50,001–$100,000	29	100	76.79	23.21	3.14	20.07	12.87	1.63	.87	.85	.29	.38	3.18	1.60	1.25	2.85
Over $100,000	7	100	76.94	23.06	4.47	18.59	11.63	1.58	.71	.88	.24	.35	3.20	1.44	1.33	2.77
All unlimited delivery stores	60	100	75.82	24.18	3.23	20.95	13.41	1.81	.85	.96	.34	.38	3.20	1.86	1.35	3.21
All individual retail stores	129	100	76.44	23.56	3.01	20.55	13.16	2.18	.97	1.00	.33	.42	2.49	-------	-------	-------

[1] A minus (−) sign indicates a loss store.
[2] Interest on investment not included as an expense.
[3] An analysis of other expense according to the number of stores from which data were obtained for each item of expense is presented in Table 5.
[4] For the purpose of comparison between stores of different classes of service, the items of delivery wages, and other delivery expense which are shown separately under these headings have also been included in the percentages in the salaries and wages and other expense columns.
[5] The small number of stores in this group and the variation among their margins and expenses render the results of limited value.

The gross margin is a particularly important figure to the retail meat dealer. It is out of the amount which the gross margin percentage represents that he must meet his expenses of operation before realizing a profit. Numerous factors contribute to variations in margin, the more important of which are probably those identified with inefficient methods of operation.

As observed in Table 4, there was a tendency for loss stores to operate at a lower gross margin percentage than the profit stores. The number of stores operating at a loss was few, so that the results should be interpreted with due recognition of this limitation. More conclusive results are presented in the later section devoted to profits in individual retail meat markets. In so far as the data presented in Table 4 are concerned, the tendency toward lower gross margin percentages was most definitely marked in the group of unlimited-delivery stores. This situation is probably to be expected, since this group contains the larger number of stores and may be regarded as a somewhat more representative group.

Data were not available to determine definitely why this tendency toward lower margin percentages should be found in loss stores. It was obvious, however, that any cause which contributed toward inefficiency in handling or selling reduced the total margin possible from the sale of a definite quantity of goods, since gross margin represented the difference between net receipts from sales and the cost of the goods sold.

When gross margin percentages are low the more important factors which should be examined by the proprietor are careless weighing, excessive trimming, deterioration and spoilage occasioned by improper refrigeration, possible dishonesty of employees, lack of accurate information on the part of the proprietor regarding the cost of doing business, a low-price policy which is not based on adequate information regarding the quantities of various cuts yielded by a dressed meat carcass, and lack of careful buying.

It is attention to factors such as these which marks the efficient dealer and this efficiency is no doubt reflected in the larger gross margin realized by the more efficient dealer. The fact that loss stores exhibit a tendency toward lower gross margin percentages should, therefore, be of particular significance to proprietors of such stores.

The influence of service as a factor in cost variation was well illustrated in the differences in gross margin among stores of the three types. The carry-store class, which offered the least service, had the lowest margin, 22.98 per cent. The limited-delivery group, offering only limited service, was next with a slightly higher percentage margin of 23.09, and the unlimited-delivery class was highest with a margin of 24.18 per cent.

The effect of increasing volumes of net sales in reducing gross margin percentages was not shown generally by the data. In the carry class, however, the profit-and-loss combined group showed a tendency toward a decrease in gross margin percentage as volume of sales increased. The higher per cent of 23.21 for the stores with net sales over $100,000 was attributable to the fact that four of these five stores were located in the Pacific coast cities, where expenses in percentage of sales were somewhat larger than in other sections of the country. The limited-delivery group did not show any marked

tendency toward decrease in gross margin percentage as net sales volumes increased. The principal reason for this was probably that the number of stores within some of the size groupings was too small to be representative. In the unlimited-delivery class the tendency toward a decrease in gross margin percentage with an increase in sales volumes was marked in each of the profit-and-loss groups and again in the combined group of both profit-and-loss stores.

TOTAL EXPENSE

The average total expense for all individual retail meat stores for 1923 was 20.55 per cent of net sales. The lowest percentage of expense, 19.74, was found in carry stores. The limited-delivery group expense was higher, this percentage being 20.80, whereas the unlimited-delivery group percentage was 20.95, which was the highest percentage of the three groups. The differences in percentages were in fair agreement with the expected cost variations occasioned by differences in services rendered.

The efficiency of the profit-store group was reflected in a tendency toward lower total expense percentages. It was significant that in the case of loss stores not only was the tendency toward lower gross margin percentages more apparent than in the case of profit stores, but total expense percentages were higher. The combination of these two facts would seem to point toward a general inefficiency of management as the cause of unprofitable operation rather than toward factors outside the stores over which the proprietors had no control.

It seems reasonable to believe that if the same degree of efficiency had been exercised in the management of the loss stores, they would have been operated at about the same percentage of total expense as profit stores of the same class of service. The same general conditions of expense applied to both the profit and loss stores in a locality. The degree of efficiency with which profit stores were operated was reflected in their lower expense percentages. Since the loss stores were not operated at as low expense percentages as profit stores, the conclusion seemed to be that the conduct of such stores was marked by a greater lack of efficiency on the part of the managements. Several factors contributing to this conclusion are discussed later in connection with the study of profit and loss stores and their efficiencies as reflected in margin and expense variations.

The tendency toward a percentage decrease in total expense with increase in the volume of net sales was shown to some extent by the data. Whatever exceptions were noted, such as that in the profit group in the carry class and the similar group in the limited-delivery class, may be attributed to the smallness of the number of stores falling within these groups rather than to any other important factor.

SALARIES AND WAGES

Salaries and wage expense as a percentage of net sales averaged 13.16 per cent for the 129 individual retail meat stores for the year 1923. The average salary and wage percentage in the carry group was 12.66. In the limited-delivery group it was slightly higher, being 13.29, and in the unlimited-delivery group the expense was 13.41 per cent of net sales.

Reference to Table 4 will show that in most cases the ratio of salary and wage expense to net sales decreased as volume of net sales increased. The group of limited-delivery stores was small in number and such variations as were noted from a decrease in salary and wage expense as the volume of sales increased were attributed to the limited number of stores within each of the size groupings.

In the carry store and unlimited-delivery store classes a very definite tendency toward decreasing salary and wage percentage was shown in both the profit and loss groups and in the combined groups for each of these classes of stores. In the combined profit-and-loss group of carry stores, there was a decrease of 2.57 in the wage expense percentage between the stores in the lowest group and those in the group of sales over $100,000. In the group of unlimited-delivery stores, there was a difference of 4.95 in the wage expense percentage between stores of the lowest volumes of sales and the highest. A portion of the difference between the 2.57 per cent thus observed for the carry group and the 4.95 per cent in the unlimited-delivery group was attributable to the fact that four of the five carry stores, whose net sales volumes were over $100,000, were located in the Pacific coast section where wages were generally higher than in the other sections of the country.

Stores of the loss group showed a tendency toward higher salaries and wages percentages in all three classes of stores than those of the profit group. The conclusion to be drawn in this instance would seem to be similar to that observed in the gross margin and total-expense percentages. It would again appear that the loss stores' management inefficiency was reflected in a higher wage expense than was found in profit stores. A portion of this observed increase, in so far as the present data were applicable, was explainable by the tendency to employ more employees in loss stores than in profit stores of similar volumes. This fact added weight to the conclusion that inefficiency of management was an important contributing factor to loss conditions in retail meat stores.

RENT

The average rent percentage for 129 individual straight markets, operated as retail stores, was 2.18 in 1923. Rent as a percentage of net sales for the carry class was 2.51, for the limited-delivery class 2.49, and for the unlimited-delivery class, 1.81. The differences noted among these average percentages for rent were in agreement with the expected variations. The carry stores were altogether dependent, and the limited-delivery stores were dependent to a very great extent, upon customers who came to the stores. Therefore, locations were selected convenient to the expected clientele. These locations were of necessity in either the business districts or in other important areas, where numbers of people would find the stores readily accessible. Such locations commanded higher rents, and the data clearly indicated this fact.

On the other hand, the unlimited-delivery markets, which were service stores, did not depend as much as the carry stores upon transient trade and on accessibility of location. They were, there-

fore, able to occupy sites in residential and other relatively low-rent districts. The service stores' appeal to customers was made not so much through convenience and accessibility as through the services of credit and delivery which they extended.

With the exception of the loss group in the limited-delivery class, rent percentages were higher in loss stores than in profit stores. It would seem clear, under these circumstances, that loss stores were attempting to occupy spaces which were poorly chosen, in so far as trade was concerned, or which were located in districts where rents were too high for meat markets.

When rent expense was analyzed with respect to volumes of sales, it was noted that the combined profit-and-loss group in the carry and limited-delivery classes indicated a tendency toward a higher rent percentage in relation to sales as the volume of net sales increased. This condition was not unexpected, since in order to obtain larger volumes of business it was necessary to occupy the favorable locations, which commanded higher rental values.

In the unlimited-delivery class a very definite tendency toward decrease in the rent percentage was observed as volume of net sales increased. This was due to the fact that the unlimited-delivery stores were not usually located in the higher-rent districts and because they offered credit and delivery service rather than accessibility to customers. Their choice of location was, therefore, greater and the effect of volume in decreasing rent expense as a percentage of sales was apparent.

WRAPPINGS

Wrapping-expense as a percentage of net sales in 129 individual retail meat markets was 0.97. In the carry class, the average percentage for this expense was 1.08; in the limited-delivery class, 1.07; and in the unlimited-delivery class, 0.85.

This item of expense brought out clearly the relations between the limited-delivery class and the carry class in that their wrapping expense was similar, because of a similar relation in the type of service rendered. Both catered to the carry class of customers as pointed out in connection with rent expense. It was usually the custom to use more material, including paper and paper bags, in wrapping purchases made in carry stores and it was to be expected that the wrapping expense for stores whose clienteles were carry customers should be similar. In the unlimited-delivery class the 0.85 per cent wrapping expense was lower than that of either of the other two classes of stores.

When each of the three classes of stores was divided according to profit and loss groupings it was observed that in the carry class and in the unlimited-delivery class wrapping-expense percentage was greater in the loss than in the profit groups.

REFRIGERATION

The average refrigeration expense for 129 individual retail meat markets was 1 per cent of net sales. Some variation was noted among the three classes of stores. The average for the carry class

was 1.12 per cent, for the limited-delivery class, 0.93 per cent, and for the unlimited-delivery class 0.96 per cent. In all classes refrigeration expense in profit stores was less than in the loss stores, although the wide variations noted in the refrigeration expense percentages of the smaller-sized stores in the loss groups of the carry and limited-delivery classes rendered the conclusions regarding differences between profit and loss stores in these classes less definite than in the case of some of the other expenses which did not tend to show such variations.

Stores with smaller sales volumes usually showed greater refrigeration expense in relation to sales. This probably indicated more incomplete utilization of refrigeration facilities. The tendency toward a decreased refrigeration cost percentage with an increased volume of net sales was marked.

LIGHT AND POWER

The average light and power expense for the 129 individual retail meat markets in 1923 was 0.33 per cent of sales. This item did not include power for refrigeration, which was added to refrigeration expense whenever an ice machine was used. But little variation in light and power percentages was noted among the various classes of stores. For the most part, however, there was a decrease in light and power expense percentage as volume of sales increased. In all three classes of stores, the profit-store group had a smaller light expense percentage than the loss group.

DEPRECIATION

Depreciation as shown in Table 4 was exclusive of depreciation on delivery equipment and on refrigeration equipment. The average depreciation figure for the 129 individual retail meat markets was 0.42 per cent. In the carry group the average was 0.46 per cent, in the limited-delivery group, 0.44 per cent, and in the unlimited-delivery group, 0.38 per cent. A slightly higher depreciation expense percentage was to be expected in the carry stores, in which the investment in shop and office equipment was slightly greater than that of the unlimited-delivery class. The carry stores depended not only upon location, but upon appearance, to a much greater extent for their attraction of trade than unlimited-delivery stores. As depreciation expense was based on the investment in shop and office equipment, its percentage relation should have been greater in carry stores than in unlimited-delivery markets.

OTHER EXPENSE

It was necessary in analyzing and compiling the data to combine the remainder of the miscellaneous expense items into a general "other-expense" group. This condition arose either because all stores did not incur all items of expense, or because the various items could not be segregated. For example, since the proprietors of some stores did not advertise, any averages based on the total

number of stores which included both those which advertised and those which did not would not properly represent the percentage of advertising expense as actually incurred by the stores which advertised. Accordingly, in order that these differences might be brought out as clearly as possible, other expense was analyzed separately and according to the number of stores from which each of the various items of expense was obtained. These averages, together with the number of stores, are presented in Table 5.

Owing to the small number of stores that reported some of the items, it was not possible to divide the stores according to volumes of sales groupings within the profit and loss groups for each class of stores, but averages for profit and for loss stores are shown separately for each class.

TABLE 5.—*Analysis of other expense of individual retail meat markets for 1923* [1]

[Expense amounts expressed as percentages of net sales]

Stores arranged by classes of service, annual sales volumes, and profit and loss groups	Telephone		Laundry		Bad debts		Advertising		Insurance	
	Number of stores	Per cent	Number of stores	Per cent	Number of stores	Per cent	Number of stores	Per cent	Number of stores	Per cent
Carry stores:										
$14,000–$25,000	5	0.27	4	0.26	2	0.24	------	------	3	0.25
$25,001–$50,000	13	.17	12	.24	6	.19	11	0.32	11	.13
$50,001–$100,000	7	.17	7	.23	2	.05	7	.35	7	.17
Over $100,000	3	.08	3	.22	1	.05	3	.94	3	.26
All carry stores	28	.18	26	.23	11	.16	21	.42	24	.17
Profit carry stores	24	.17	22	.23	9	.10	17	.42	19	.17
Loss carry stores	4	.25	4	.24	2	.45	4	.41	5	.18
Limited-delivery stores:										
$14,000–$25,000	4	.31	3	.27	2	.38	2	.08	4	.10
$25,001–$50,000	10	.24	9	.26	2	.48	8	.28	8	.15
$50,001–$100,000	8	.16	8	.28	6	.16	8	.43	8	.15
Over $100,000	6	.09	6	.26	3	.20	6	.77	6	.21
All limited-delivery stores	28	.19	26	.27	13	.25	24	.44	26	.16
Profit limited-delivery stores	21	.17	21	.26	10	.25	21	.45	20	.16
Loss limited-delivery stores	7	.27	5	.32	3	.26	3	.35	6	.15
Unlimited-delivery stores:										
$14,000–$25,000	4	.38	4	.18	1	.42	3	.68	3	.12
$25,001–$50,000	14	.30	11	.29	11	.42	12	.36	12	.16
$50,001–$100,000	28	.23	23	.19	9	.41	23	.45	23	.21
Over $100,000	7	.24	5	.21	3	.14	7	.45	6	.21
All unlimited-delivery stores	53	.26	43	.22	24	.38	45	44	44	.19
Profit unlimited-delivery stores	41	.25	32	.22	20	.39	35	.42	34	.18
Loss unlimited-delivery stores	12	.30	11	.22	4	.33	10	.51	10	.22

[1] Owing to the varying numbers of stores from which figures were obtained for the expense items shown in this table, the totals of the averages of the items for each group of stores will not be equal to the total shown for the corresponding group in Table 4.

TABLE 5.—*Analysis of other expense of individual retail meat markets for 1923*—Continued

[Expense amounts expressed as percentages of net sales]

Stores arranged by classes of service, annual sales volumes, and profit and loss groups	Taxes		Repairs		Unclassified		Other delivery [2]	
	Number of stores	Per cent	Number of stores	Per cent	Number of stores	Per cent	Number of stores	Per cent
Carry stores:								
$14,000–$25,000	1	0.14	3	0.19	7	0.59	------	------
$25,001–$50,000	15	.12	9	.12	17	.86	------	------
$50,001–$100,000	6	.13	4	.17	8	.68	------	------
Over $100,000	3	.05	3	.14	5	1.08	------	------
All carry stores	25	.11	19	.15	37	.80	------	------
Profit carry stores	22	.10	17	.13	31	.68	------	------
Loss carry stores	3	.17	2	.27	6	1.41	------	------
Limited-delivery stores:								
$14,000–$25,000	4	.11	2	.09	5	1.71	------	------
$25,001–$50,000	8	.11	7	.14	12	1.17	------	------
$50,001–$100,000	6	.10	7	.08	8	.72	------	------
Over $100,000	4	.05	4	.11	6	.97	------	------
All limited-delivery stores	22	.10	20	.11	31	1.10	------	------
Profit limited-delivery stores	16	.09	15	.11	23	1.06	------	------
Loss limited-delivery stores	6	.12	5	.09	8	1.20	------	------
Unlimited-delivery stores:								
$14,000–$25,000	4	.18	2	.15	4	2.10	5	1.86
$25,001–$50,000	13	.10	8	.31	18	2.07	19	1.39
$50,001–$100,000	25	.11	19	.23	29	1.91	29	1.25
Over $100,000	6	.08	6	.14	7	1.93	7	1.33
All unlimited-delivery stores	48	.11	35	.23	58	1.98	60	1.35
Profit unlimited-delivery stores	37	.10	27	.20	45	1.91	47	1.22
Loss unlimited-delivery stores	10	.14	8	.31	13	2.28	13	1.85

[2] Also included in unclassified expense of this table.

TELEPHONE

In carry stores, the average telephone expense ratio to net sales was 0.18 per cent and in limited-delivery class, the ratio was practically the same, being 0.19 per cent of net sales. In the unlimited-delivery class, however, the expense was 0.26 per cent of sales, which was greater than in either of the other two groups. Delivery stores of the service class, which predominated in the unlimited-delivery class, thus made greater use of the telephone than carry or limited-delivery stores. This was in agreement with the fact that service stores find it necessary to make extensive use of the telephone in soliciting and receiving orders for delivery. A definite tendency was shown in all cases for telephone expense percentage to decrease as volume of sales increased. The fewness of the loss carry stores probably limited the value of comparison, but it was interesting to note that the loss groups in all classes showed higher telephone expense percentage than the profit stores.

LAUNDRY

The item of laundry expense was of about the same percentage importance as telephone expense. It did not show any marked varia-

tion, however, between stores of various classes or between stores of different sales volumes with the same class. Furthermore, when the classes were divided according to profit and loss groupings no significant differences were noted.

BAD DEBTS

In some of the carry stores, where the proprietors reported that the business was 100 per cent cash, close analysis disclosed that there were losses from bad debts. In other words, some credit was extended by a few so-called cash-and-carry operators. In the present instance, 11 of the carry stores showed losses from bad debts amounting to an average of 0.16 per cent of net sales.

In the limited-delivery class, loss from bad debts was 0.25 per cent of sales. This was higher than that of the carry stores and was a result of the increased service which this type of store rendered to its customers. The unlimited-delivery group averaged a much larger percentage loss from bad debts. The 0.38 per cent noted for this class of store was in keeping with the increased extension of credit by these more unlimited-service stores.

An inspection of losses from bad debts indicated that as volume of sales increased, the percentage losses decreased. This seemed to indicate a closer attention to credit granting and to collection of accounts by the managements of the larger stores.

ADVERTISING

The average advertising expense for the three classes of stores varied but little, being 0.42 per cent of net sales for the carry stores, 0.44 per cent for the limited-delivery class, and 0.44 per cent for the unlimited-delivery class. Furthermore, little variation was observed between the profit and loss stores within each of the classes. However, when advertising was analyzed according to volume of sales within each class of store, it was found that in the carry and limited-delivery classes, the expense percentages were notably higher in those stores whose volumes of sales were over $100,000. This was brought about by the necessity for drawing trade from outside the area which would normally be served by each of these stores. The most obvious and direct means of attempting to accomplish this result was advertising and the data reflected this. The differences among stores of various classes and the stores of varying volumes within each class are clearly brought out in Figure 1.

INSURANCE, TAXES, AND REPAIRS

Percentages representing these three items of expense showed but little variation among the three classes of stores.

UNCLASSIFIED EXPENSE

The variation noted in this item of expense when expressed as a percentage of net sales in stores of the various classes was brought about to a large extent by the including of other delivery expense as a portion of the unclassified expense.

DELIVERY EXPENSE

The average delivery expense for stores of the limited-delivery class was 1.03 per cent. (See Table 4.) In stores of unlimited-delivery class the average percentage was 3.21. The wide difference between these percentages for the two classes was readily explained by the variation in the extent to which delivery service was offered and utilized. The limited-delivery class depended upon means other than its own delivery facilities for delivery of the small number of sales made on a delivered basis. Contract delivery and central delivery were the means most often used by stores of this class. Delivery expense in such stores did not lend itself to analysis, since there was an element of profit included in the amounts which were paid to outsiders for contract delivery and the necessary data for

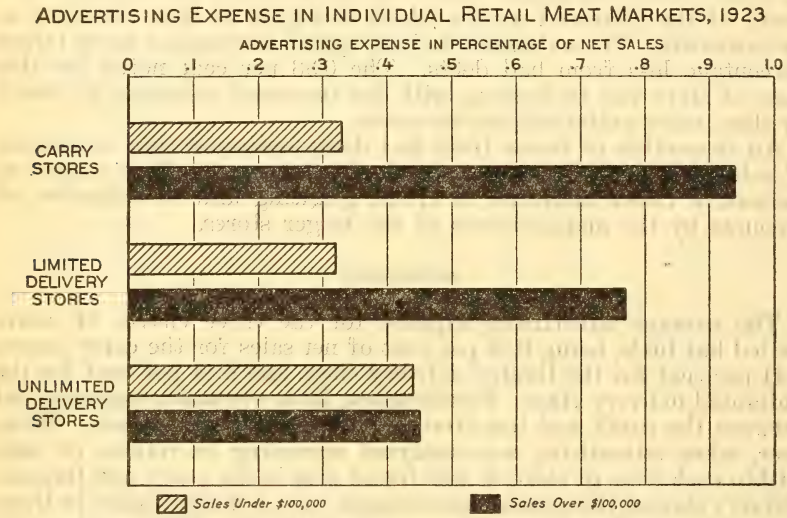

FIG. 1.—Advertising expense in percentage of net sales was greatest in carry and limited-delivery stores in which the annual volumes of sales were over $100,000. No significant differences were found in the extent to which advertising was employed by the unlimited-delivery stores in which annual sales volumes were below $100,000 and by stores of the same type where the annual sales volumes were over $100,000

analysis were not available. However, the difference in the extent of delivery service used by stores of these two classes was made apparent through the variation in delivery expense.

When the stores were divided according to profit and loss groupings, a delivery cost of 0.74 per cent was noted for the profit limited-delivery stores and 1.88 per cent for the loss stores of the same class. In the unlimited-delivery store class, the profit stores incurred a percentage delivery expense of 3.02, whereas the loss stores' percentage was 0.90 higher, or a total of 3.92. As volume of sales increased, there were indicated for the profit and loss groups of stores in both the limited and unlimited delivery classes very rapid decreases in delivery expense as a percentage of total net sales.

In analyzing delivery expense, it was desirable to consider the total expense incurred for this service and to study its relation to the value of goods actually delivered. Retail meat dealers gener-

ally do not keep records of the value of goods sold over the counter and of goods sold on a delivered basis. It was necessary, therefore, to obtain estimates from the various proprietors of the relative amounts of sales which were sold on a carry and on a delivered basis. Stores with similar volumes of delivered sales, when these amounts were measured in dollars, showed but slight variation in delivery expense percentages, so that the validity of the estimates seemed to be fairly well established.

The result of this phase of the study of delivery costs is presented in Table 6. In this table, delivery expense is shown in percentages of both delivered sales and total sales for 61 unlimited-delivery stores. It is customary to indicate delivery expense as a percentage of total sales, but there also appears reason for applying the delivery expense to the portion of the business for which the expense was primarily incurred.

TABLE 6.—*Delivery expense in percentages of total sales and delivered sales in 61 individual unlimited-delivery retail meat markets, 1923*[1]

Volume of sales delivered	Number of stores	Delivery expense in per cent of value of delivered sales	Delivery expense in per cent of value of total sales
Less than $22,000	28	11.62	3.19
$22,000 to $44,000	18	5.77	3.09
Over $44,000	15	4.71	3.19

[1] Includes 1 store with annual total sales of less than $14,000.

In the 28 stores in which the volumes of delivered sales were below $22,000, the average percentage delivery cost was 11.62. The average delivery expense percentage in stores where the value of delivered sales was between $22,000 and $44,000, was 5.77, when the expense was expressed as a percentage of the volume of delivered sales. In stores where the volume of delivered sales was over $44,000, the corresponding percentage was 4.71. There was thus indicated a great variation between the stores in which delivered sales amounted to less than $22,000 and those in which the sales were larger. It was significant that there was no great variation in the percentages of the 33 stores in which sales were above $22,000, as in the larger number of these stores the percentage ranged between 4 and 6 per cent.

It seemed evident that in the 33 stores in which the volume of delivered sales was above $22,000 delivery cost was about 5 per cent of delivered sales. The decrease in cost observed was no doubt largely brought about by the increased utilization of delivery facilities in the stores with the larger volumes of delivered sales.

Efforts were made during the course of the study to locate, if possible, stores using methods by which all or a portion of the delivery cost was charged to the customers for whom these services were rendered. No outstanding example of such methods was found and it seemed evident on the basis of this study that in general no satisfactory scheme had as yet been devised for charging the delivery cost direct to the customer demanding the service. The general policy was to regard the delivery expense as an expense chargeable

to the entire business rather than to the portion of the business which was directly responsible for the incurring of the expense.

MARGINS, EXPENSES, AND PROFITS BY SECTIONS

For the purpose of determining any variation in margins, expenses, and profits which might exist between various sections of the country, the cities from which retail meat market cost of operation data were procured were grouped as follows: (1) Northeast section, New Haven and Bridgeport, Conn., Binghamton, N. Y., Baltimore, Md., and Washington, D. C.; (2) central section, Minneapolis and St. Paul, Minn., Lincoln, Nebr., Denver, Colo., and Cheyenne, Wyo.; (3) south section, Birmingham, Ala., Jacksonville, Fla., and New Orleans, La.; and (4) Pacific coast section, Seattle, Wash., and San Francisco, Calif.

Gross margins, profits, and the more important expenses expressed as percentages of net sales in carry stores and unlimited-delivery stores for these four sections of the country are shown in Table 7. The limited-delivery class was not used because of the few stores included in the data from the cities of each of these four sections. There are also shown for the same groups of cities profit store percentages for each of these two types of markets. The profit stores were presented because it was believed that they more nearly approached a proper representation of the differences between the four sections. This belief was based primarily upon the fact that the proportion of loss stores varied in the group of stores from which data were collected in each of the sections. Wide variations, which thus might have been introduced by abnormal fluctuations in margin and expense percentages occasioned by the errors of management policies in loss stores, were thus eliminated. Comparison was thus based on data from only those stores in which the operation had apparently been conducted in an efficient and competent manner.

TABLE 7.—*Gross margins, expenses, and profits in individual retail carry and unlimited-delivery markets by sections of the country, 1923*

[Amounts expressed as percentages of net sales]

Section and store groups	Number of stores	Cost of goods	Gross margin	Profit	Total expense [1]	Salaries and wages	Rent	Wrappings	Refrigeration	Light and power	Depreciation	Other expense [2]
All carry stores:												
Northeast	11	80.39	19.61	2.21	17.40	12.56	1.55	0.92	0.91	0.32	0.26	0.88
Central	11	76.35	23.65	4.32	19.33	12.29	2.25	1.09	1.08	.26	.47	1.89
South	5	76.32	23.68	3.07	20.61	12.14	3.05	.99	2.01	.49	.52	1.41
Pacific coast	11	74.63	25.37	3.27	22.10	13.35	3.50	1.28	.95	.23	.63	2.16
All unlimited-delivery stores:												
Northeast	22	76.96	23.04	4.36	18.68	12.76	1.29	.74	.77	.29	.23	2.60
Central	17	76.66	23.34	1.19	22.15	13.47	1.92	.94	1.11	.46	.49	3.76
South	8	75.06	24.94	2.55	22.39	12.76	2.82	.96	1.53	.50	.44	3.38
Pacific coast	13	73.25	26.75	4.42	22.33	14.84	1.91	.87	.74	.16	.45	3.36
Profit carry stores:												
Northeast	8	79.46	20.54	3.83	16.71	11.55	1.74	.92	1.03	.28	.27	.92
Central	11	76.35	23.65	4.32	19.33	12.29	2.26	1.09	1.07	.26	.47	1.89
South	4	77.36	22.64	3.96	18.68	11.56	2.35	1.02	1.59	.47	.41	1.28
Pacific coast	8	74.82	25.18	5.15	20.03	12.77	2.63	1.21	.95	.21	.65	1.62
Profit unlimited-delivery stores:												
Northeast	19	76.04	23.96	5.61	18.35	12.58	1.21	.76	.71	.30	.23	2.56
Central	10	74.80	25.20	4.27	20.93	13.01	1.57	.80	1.09	.48	.33	3.65
South	6	73.73	26.27	4.12	22.15	12.88	2.78	.98	1.40	.46	.42	3.23
Pacific coast	12	73.22	26.78	4.85	21.93	14.51	1.92	.87	.75	.17	.46	1.92

[1] Interest on investment not included as an expense. [2] Includes all delivery expense other than wages.

In the groups of stores in which both profit and loss stores were combined and in the profit group for each class of store, considerable variations were found in gross margin. The relations were changed somewhat when the loss stores were eliminated. Thus, in the carry class, the profit stores in the southern section had a lower gross margin than the combined profit and loss average for the same section. Too much significance should not be placed on the results shown for this section as the number of stores was small in both the carry and unlimited-delivery classes. The Pacific coast section stores had a higher margin in both classes of markets.

The variations between stores according to class of service were marked. Profit carry stores for the northeastern section had a gross margin of 20.54 per cent and unlimited-delivery stores 23.96 per cent. In the central section, the carry store gross margin percentage was 23.65, and in the unlimited-delivery stores 25.20. In the South, the profit carry store gross margin percentage was 22.64, and in unlimited-delivery stores the margin percentage was 26.27. In the Pacific coast section the carry store gross margin percentage was 25.18, and in unlimited-delivery stores a percentage of 26.78 was indicated. The relatively larger margins in profit unlimited-delivery stores, when compared with profit carry stores, held true for the combined profit and loss groups for each of these two classes with the exception of the stores in the central section. A large number of loss stores occurred in the data from this area and was responsible for the low gross margin shown in the combined profit and loss group.

The items of total expense according to sections of the country followed rather closely the observed variations in gross margins. It was noted, however, that in the case of the profit unlimited-delivery class in the southern section of the country that the total expense percentage was slightly higher than in the Pacific coast section where wages were higher. The limited number of stores from which data were obtained in this area reduced the significance of these differences.

In all instances, salary and wage percentages in the unlimited-delivery stores were higher than those in carry stores. Similarly, with the exception of the previously mentioned higher percentage of rent shown for the unlimited-delivery stores in the South, rents in the carry stores were higher than those in the delivery groups.

PROFIT IN INDIVIDUAL RETAIL MEAT MARKETS

Profit and loss in 1923 determined in this survey were in the nature of trading profit and loss and varied from true profit and loss in the economic sense by an amount equal to interest on borrowed capital and on the proprietor's net capital investment in the business. The including of borrowed capital interest in the profit percentage had slight significance in so far as the data from these stores were concerned, as this interest averaged less than 0.02 per cent of sales for all stores. It mattered little, then, whether it was included or not, either as an expense or in profit, as this percentage was definitely below the accuracy of the data.

In most of the stores, data were not available for determining the proprietors' net investments in their respective businesses. It so happens that interest on both owned and borrowed capital in the retail meat trade is not usually an item of large significance, so that expense is little influenced by its being included or excluded. It is believed that an estimated percentage of 0.5 per cent for carry stores and 0.7 per cent for delivery stores will be found to be close approximations of the average interest charges. These percentages apply only to the average figures for the groups and not to the stores within the various volumes of sales groupings in each class of store.

On the basis of this understanding of the terms profit and loss, which implies total return to proprietors exclusive of salaries, the distribution of profits and losses in the 129 individual retail meat stores for 1923 is shown in Table 8. The proprietors of 6 of these stores incurred a loss of 3 per cent or greater, in 22 stores the losses were between 2.99 and 0.01 per cent and in 39 stores the profits lay between 0 and 2.99 per cent. Thirty-five proprietors made profits between 3 and 5.99 per cent, 19 between 6 and 8.99 per cent, 6 between 9 and 11.99 per cent, and 2 made over 12 per cent.

TABLE 8.—*Individual retail meat markets grouped by rates of profit and loss, 1923*

[Losses and profits in percentages of net sales]

Profit and loss groups [1]	Number of stores	Profit and loss groups [1]	Number of stores
−3 per cent and greater	6	9 per cent to 11.99 per cent	6
−2.99 per cent to −0.01 per cent	22	12 per cent and over	2
0 to 2.99 per cent	39		
3 per cent to 5.99 per cent	35	Total	129
6 per cent to 8.99 per cent	19		

[1] Percentages preceded by a minus (−) sign indicate losses.

The average profit for 129 individual retail meat stores was 3.01 per cent of sales for 1923. The average profit for stores in the carry class was 3.24 per cent, for stores of the limited-delivery class, 2.29 per cent, and for stores of the unlimited-delivery class, 3.23. In profit carry stores, the profit percentage was 4.36, in profit limited-delivery stores 3.50, and in profit unlimited-delivery stores it was 4.94. (See Table 4.)

The low profit figures in the limited-delivery group were occasioned by the fact that these stores evidently expected to compete with carry stores in the extent of gross margin and yet found it necessary to incur some of the expense incurred because of furnishing service in excess of that rendered by carry stores. The additional cost of this service was not accompanied by a sufficiently large increase in gross margin to maintain the rate of profit enjoyed by carry stores. A lower rate of profit was the result.

Practically no relation was found between the profit and loss percentages and volumes of net sales. In other words, the return, exclusive of proprietor's salary, had no relation to the size of business. (Table 9.) The 129 individual retail meat markets were arranged according to the number of stores occurring in varying

groups of annual sales volumes and percentages of return exclusive of proprietor salary.

A study of the resulting arrangement brought out the fact that, in so far as the data of this survey were applicable, little relation existed between rate of profit and size of business.

TABLE 9.—*Individual retail meat markets arranged according to the number of stores occurring in varying groups of annual sales volumes and percentages of return to proprietors, exclusive of salaries, 1923*

Annual sales volumes	Percentage groups [1]																		
	Over 5 per cent loss	−4.99 to −4 per cent	−3.99 to −3 per cent	−2.99 to −2 per cent	−1.99 to −1 per cent	−.99 to −0.01 per cent	0 to 0.99 per cent	1 to 1.99 per cent	2 to 2.99 per cent	3 to 3.99 per cent	4 to 4.99 per cent	5 to 5.99 per cent	6 to 6.99 per cent	7 to 7.99 per cent	8 to 8.99 per cent	9 to 9.99 per cent	10 to 10.99 per cent	11 per cent and over	Total number of stores for each sales group
Under $20,000	1		1			2	1	2	2	1									10
$20,000–$30,000	1	1		3		1	3				2		1	1			1		14
$30,001–$40,000	1			1	2	1	1	5	1	1	2	3	1	1	1			2	23
$40,001–$50,000				1	1			3	2	3	1	1		1	3	1		2	19
$50,001–$60,000				1		1	1	2	2	3	2	3	1						16
$60,901–$70,000						2	3				1	2							8
$70,001–$80,000					1			1				1			1	1			5
$80,001–$90,000					1	1		2			2	1							7
$90,001–$100,000					1	2		1		1		1	2	1					9
$100,001–$110,000			1												1				2
$110,001–$120,000								1											1
$120,001–$130,000									1		1		1		1				4
$130,001–$140,000								1					1						2
$140,001–$150,000																			
$150,001–$160,000												1					1		2
$160,001–$170,000								1			1								2
$170,001–$180,000																			
$180,001–$190,000														1					1
$190,001–$200,000																			
Over $200,000							1		2		1								4
Total number of stores for each group	3	1	2	6	6	10	10	19	10	9	13	13	7	5	7	2	2	4	

[1] Percentage figures preceded by a minus (−) sign indicate extent of the failure of the businesses to make return to proprietors above estimated salaries.

Twenty-three stores were the largest number found in any one size group when the stores were grouped according to $10,000 intervals. This group contained the stores whose volumes of sales were between $30,001 and $40,000. In this sales group, there were 5 loss stores. The proprietor of 1 incurred a loss of over 5 per cent, 1 a loss between 2.99 and 2 per cent, 2 between 1.99 and 1 per cent, and 1 between 0.99 and 0.01 per cent.

In the 18 profit stores in this sales-volume group, one proprietor made a profit between 0 and 0.99 per cent, 5 between 1 and 1.99 per cent, 1 between 2 and 2.99 per cent, 1 between 3 per cent and 3.99 per cent, 2 between 4 and 4.99 per cent, 3 between 5 and 5.99 per cent, 1 between 6 and 6.99 per cent, 1 between 7 and 7.99 per cent, 1 between 8 and 8.99 per cent and 2 made a profit of 11 per cent or more. The fact that no relation was apparent between rate of profit and volume of net sales was of particular significance when the data were analyzed on a basis of profit.

For the analysis presented in Table 10, the stores comprising each of the three classes were arranged in descending order, from the

store with the highest rate of profit to the store with the largest loss. The resulting series was then divided into four parts. The first fourth of the series in each class contained the stores with the highest profit percentages. The second fourth comprised the group of stores with the next highest rates of profit. The third fourth consisted of the stores whose rates of profit were still lower than those of the second group. The stores with the lowest profit rates (or losses) were thus left to comprise the last fourth of the series.

TABLE 10.—*Margins, expenses, profits, and losses in individual retail meat markets arranged by profit and loss groupings, 1923*

[Expenses expressed as percentages of net sales]

Store groups by class of service and arrayed according to profit	Number of stores	Profit [1]	Gross margin	Total expense	Salaries and wages	Rent	Wrappings
Carry stores:							
Highest one-fourth of group	10	8.25	26.26	18.01	11.80	2.12	1.09
Second one-fourth of group	10	3.83	23.10	19.27	11.80	2.39	1.10
Third one-fourth of group	9	1.54	20.94	19.40	12.66	2.49	1.05
Lowest one-fourth of group	9	−1.27	21.25	22.52	14.56	3.12	1.08
Limited-delivery stores:							
Highest one-fourth of group	8	7.20	26.47	19.27	12.33	2.60	1.03
Second one-fourth of group	8	2.08	21.04	18.96	12.34	2.07	.97
Third one-fourth of group	8	.78	24.64	23.86	14.06	3.58	1.22
Lowest one-fourth of group	7	−1.35	19.79	21.14	14.62	1.61	1.04
Unlimited-delivery stores:							
Highest one-fourth of group	15	8.21	26.98	18.77	12.28	1.81	.75
Second one-fourth of group	15	4.95	25.57	20.62	13.58	1.54	.82
Third one-fourth of group	15	2.29	23.43	21.14	13.43	1.69	.84
Lowest one-fourth of group	15	−2.51	20.75	23.26	14.37	2.17	1.01
All delivery stores:							
Highest one-fourth of group	23	7.99	27.14	19.15	12.44	1.87	.79
Second one-fourth of group	23	4.21	24.35	20.14	13.08	1.80	.84
Third one-fourth of group	23	1.39	22.97	21.58	13.44	2.46	1.06
Lowest one-fourth of group	22	−2.16	20.63	22.79	14.58	2.03	1.01
Carry and delivery groups:							
Highest one-fourth of group	33	8.07	26.88	18.81	12.25	1.94	.88
Second one-fourth of group	32	4.14	24.09	19.95	12.71	2.01	.92
Third one-fourth of group	32	1.51	22.17	20.66	13.07	2.34	1.04
Lowest one-fourth of group	32	−1.84	21.01	22.85	14.62	2.43	1.04

Store groups by class of service and arrayed according to profit	Refrigeration	Light and power	Depreciation	Other expense	Delivery expense		
					Wages	Other	Total [2]
Carry stores:							
Highest one-fourth of group	1.00	0.31	0.41	1.28			
Second one-fourth of group	1.03	.24	.64	2.07			
Third one-fourth of group	1.20	.30	.38	1.32			
Lowest one-fourth of group	1.27	.33	.41	1.75			
Limited-delivery stores:							
Highest one-fourth of group	.74	.31	.40	1.86			0.44
Second one-fourth of group	.81	.33	.35	2.09			.58
Third one-fourth of group	1.27	.32	.56	2.85			1.55
Lowest one-fourth of group	.92	.49	.44	2.02			1.63
Unlimited-delivery stores:							
Highest one-fourth of group	.83	.27	.28	2.55	1.68	1.17	2.85
Second one-fourth of group	.83	.27	.38	3.20	1.82	1.38	3.20
Third one-fourth of group	1.01	.38	.36	3.43	1.96	1.14	3.10
Lowest one-fourth of group	1.17	.43	.51	3.60	1.96	1.73	3.69
All delivery stores:							
Highest one-fourth of group	.81	.28	.34	2.62			2.51
Second one-fourth of group	.86	.34	.36	2.86			2.58
Third one-fourth of group	1.04	.33	.41	2.84			1.70
Lowest one-fourth of group	1.11	.43	.50	3.13			3.11
Carry and delivery groups:							
Highest one-fourth of group	.87	.29	.36	2.22			
Second one-fourth of group	.93	.31	.46	2.61			
Third one-fourth of group	1.06	.32	.39	2.44			
Lowest one-fourth of group	1.15	.40	.47	2.74			

[1] A minus (−) sign indicates a loss.
[2] Delivery wages have also been included in salaries and wages and other delivery expense has also been included in other expense.

The significance of this grouping rests in the fact disclosed by the analysis presented in Table 9. There it is shown that rate of profit and volume of sales were but little related. Therefore, when the stores were arranged according to profit and significant differences were noted between profit and loss stores, the observed results were not brought about through variations occasioned by changes in sales volumes.

With slight exceptions, it was found in all groups that as the rate of profit decreased, gross margin percentage also decreased. In those groups in which slight variations were found—that is, in the lowest fourth of the carry class and in the second fourth of the limited-delivery class—the tendency toward a decreased margin percentage with a low rate of profit was sufficiently well defined to outweigh the variations noted. Similarly, total expense percentage definitely increased in all groups as rate of profit decreased, with the exceptions of the second and lowest groups in the limited-delivery class. In these two groups, the tendency toward increased total expense percentages was evident when the first two groups and the second two groups within the class were considered together.

In salaries and wage expense, a tendency toward increased percentages with decreasing rates of profit was plainly evident. Rent also showed to a marked degree this tendency toward increased percentages with decreased profit rates.

When all carry and delivery stores were placed together in one group, the tendency of gross margin percentages to decrease and expense percentages to increase as rates of profit decreased was well marked. The obvious conclusion to be drawn from these observed facts was that as the efficiency of management decreased a tendency toward loss developed. In this case, the only measures of efficiency were the variations observed in stores operating at varying rates of profit and percentages in stores incurring losses. Increased expense and decreased gross margin percentages formed the measures of decreasing efficiency of management.

There was, in so far as the data permitted of interpretation, no one item of expense particularly susceptible to management inefficiency. The situation seemed to be generally spread throughout the business, rather than concentrated at any one point. The failure to realize a gross margin percentage equal to that of the profit stores was probably due to the same internal management inefficiency which manifested itself through higher expense percentage in the stores showing tendencies toward loss conditions.

The results of this analysis of the tendency toward loss substantiates definitely the previously observed tendency toward lower gross margin and higher expense percentages in loss stores, which was discussed briefly in the sections covering gross margin, total expense, salaries and wages, and other percentages. (Fig. 2.)

TOTAL RETURNS TO PROPRIETORS OF INDIVIDUAL RETAIL MEAT MARKETS

Total returns to the proprietors of individual retail meat stores in 1923 were studied. Total return, as here used, includes the estimated wage of the proprietor, profit, and interest. That the

results may be comparable, stores owned by partnerships and corporations have been regarded as operated by one proprietor and the remaining owners have been allowed estimated wages equal in amount to the usual scale of wages paid in the locality for the services rendered by these partners, exclusive of any duties as proprietors. The functions of management were thus considered as being centered in one individual.

By this method, data from stores owned and operated under the various forms of ownership have been made comparable. Estimated wages of the proprietor were considered as applicable to one individual and returns to the remaining owners were not included, since they were regarded solely as employees of the business. The various

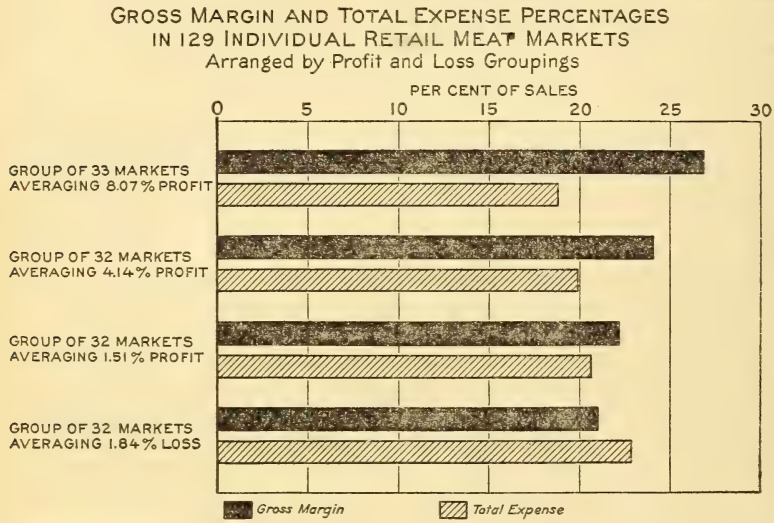

FIG. 2.—The 129 markets were arrayed in order of profit percentages and the array was then divided into four groups. The group of 33 markets with the highest profit percentages had the highest gross margin and the lowest total expense percentages. The group of 32 markets with an indicated loss of —1.84 per cent of sales had the lowest gross margin and the highest total expense percentages of the four groups. When the 129 markets were grouped by type of service and similar arrays were made on profit percentages, the results were in agreement with the general tendencies exhibited by the group of all stores combined. Total expense includes proprietor wages but no interest on investment

forms of divided proprietorship were thus reduced to comparable single ownerships.

The total number of individual retail stores from which data were obtained for the year 1923 was used. To the 129 individual retail meat markets on which the principal analysis was based, were added the 13 markets whose annual sales volumes were below $14,000. Total returns were those presented for the 142 stores in Table 11. The stores were arranged according to $10,000 groups of annual sales volumes. The annual returns to proprietors were placed in groups of $1,000 each. Some relation was shown between increased volume of sales and greatly increased returns. Such a relation was obviously to be expected. Of the total 142 stores, returns to the proprietors in 76 were less than $3,500 per year. Of

these 76 proprietors, 8 received less than $500, 16 between $500 and $1,500, 32 between $1,501 and $2,500, and 20 between $2,501 and $3,500.

TABLE 11.—*Individual retail meat markets arranged according to the number of stores occurring in varying groups of annual sales volumes and total annual return to proprietors, 1923* [1]

Annual sales volume	Total annual return to proprietors														
	Less than $500	$500–$1,500	$1,501–$2,500	$2,501–$3,500	$3,501–$4,500	$4,501–$5,500	$5,501–$6,500	$6,501–$7,500	$7,501–$8,500	$8,501–$9,500	$9,501–$10,500	$10,501–$11,500	$11,501–$12,500	Over $12,500	Total number of stores for each sales group
Less than $10,000		4	4												8
$10,000–$20,000	2	3	9	1											15
$20,001–$30,000	1	4	4	2	3										14
$30,001–$40,000	2	1	7	3	6	2	1		1						23
$40,001–$50,000	1		3	6	3		3	3							19
$50,001–$60,000		1	2	3	3	5	2								16
$60,001–$70,000	1	1	2	1			3								8
$70,001–$80,000		1			1		1			1	1				5
$80,001–$90,000		1		1	1	1	1	2							7
$90,001–$100,000			1	3				2	1	1				1	9
$100,001–$110,000	1												1		2
$110,001–$120,000						1									1
$120,001–$130,000						1	1						1	1	4
$130,001–$140,000							1					1			2
$140,001–$150,000															
$150,001–$160,000													1	1	2
$160,001–$170,000							1	1							2
Over $170,000							1	1			1	1		1	5
Total number of stores for each group of proprietor returns	8	16	32	20	17	10	15	9	2	2	2	2	3	4	142

[1] Total return includes salary allowed to the proprietor, interest on the investment in the business, and any profit in addition to salary and interest. In partnerships, one partner has been regarded as the proprietor, the remaining partner or partners as employees.

Individual retail markets with annual sales volumes below $14,000 have been included in this table.

An examination of the data of Table 11 led to the conclusion that within a given group of annual returns to proprietors, there was very little relation between volumes of sales and return.

Wide variation in the volumes of sales was also noted for the other groups of returns.

RETAIL MEAT STORES WITH ANNUAL SALES VOLUMES OF LESS THAN $14,000

Individual retail meat markets with annual sales volumes below $14,000 were not usually included in the discussion and tables of this study. Limited mention has already been made of the reasons for the elimination of these stores.

In the course of the survey, profit and loss statements were prepared for 13 stores whose annual sales volumes were less than $14,000. The division of these markets according to class of stores, services rendered, and profit and loss is given in Table 12.

TABLE 12.—*Individual retail meat markets with annual sales volumes less than $14,000*

Class of service	Total number of stores	Number of stalls in public markets	Number of straight meat markets not in public markets	Number of stores operated at a—	
				Profit	Loss
Carry	9	7	2	3	6
Limited-delivery	3	3			3
Unlimited-delivery	1		1		1
Total	13	10	3	3	10

The primary consideration in deciding whether these small stores were to be included was whether the conditions under which they operated were such that there was a possibility that the proprietors would make a profit above wage allowance, equal to the usual wage for cutters in the locality where each store was situated. It was noted that of the 13 stores, only 3 were able to show a profit and these were stalls in public markets. The 3 stores operated outside public markets were conducted at a loss when proprietor wages were considered as an expense of the business.

Of the three markets operated at a profit, two showed very high gross margins for stores in their class—27.09 and 33.84 per cent of net sales. This enabled them to meet the high expense which they incurred. In the remaining store which showed a profit, refrigeration expense was materially lower because of a central refrigeration plant, no advertising expense was incurred, equipment investment was very small in amount, so that the amount of expense in addition to wages was at a minimum and the proprietor received a profit above an estimated wage.

Of the 10 loss stores, 6 showed very high percentages of loss when proprietor wages were estimated. Nine of these 10 loss stores operated at very high gross margin percentages when compared with other stores in the same area.

Total returns to the proprietors of businesses under $14,000 were included in Table 11. One proprietor realized a total return of $2,000 from his business, 3 between $1,800 and $1,900, 2 between $1,600 and $1,700, 1 slightly over $1,500, 1 a little less than $1,300, 1 just over $1,100, 1 a little over $800, 2 between $700 and $800, and 1 suffered an actual loss of $548 without the inclusion of a small interest charge on the small amount of capital invested in the business.

Consideration of these factors led to the elimination of these small operators from the main portion of the study, since it was felt that no satisfactory and equitable method of establishing a wage for proprietors of these small businesses had been devised.

SALES PER EMPLOYEE

Salaries and wage expense in individual retail meat shops for 1923 was found to be approximately two-thirds of total expense. A special effort was made to analyze in detail the wage item and utilization of employees' time. Data were collected showing the

number of employees, both full time and part time, together with the rates of pay and estimates of the time required for various duties. The proprietor and any member or members of his family engaged in operating the store were included in this employee information. The detailed information served a twofold purpose: (1) It served as a check of the accuracy of the amount of wages reported paid to employees and (2) it formed the basis for a study of efficiency in the use of employees.

In the smaller retail meat stores one man performed a variety of duties. Buying, cutting, selling, keeping accounting records and other necessary duties of operation all came within the supervision of one individual. As the size of markets increased, the tendency toward division of labor became evident, so that different individuals performed various duties. For example, in some markets, salesmen did no buying or cutting, and the duties in connection with cash receipts and accounting records were performed by cashiers and bookkeepers.

Under these conditions, comparison of the utilization of employees' time was possible on one of two bases: (1) Sales per salesman and (2) sales per employee. The first of these presents a difficulty. In small establishments estimates would have been required of the proportion of each employee's time spent in selling, buying, and other duties. Estimates of this nature would have been required from all stores, if the comparison were to be based on employees' time devoted exclusively to selling. Otherwise, the results in smaller stores in which employees performed other duties besides selling would not have been comparable with sales per salesman in the larger stores where certain employees devoted all or the greater portion of their time to selling. It was practically impossible to obtain reliable estimates of this nature, and this basis of comparison could not be used.

Sales per employee were more accurately obtained, and formed a fairly reliable index of the degree of efficiency exercised in the use of employees.

In determining the number of employees, both full-time and part-time employees, including the proprietor and members of his family engaged in carrying on the business, were used. The total time spent by the part-time employees in the shop was converted to a full-time employee basis. Net sales were then divided by this total number of employees and the average annual sales per employee thus determined.

The average percentages of gross margin, total expense, salary and wage expense other than salaries and wages and profit for 129 individual retail meat markets were arranged according to average annual sales per employee. (See Table 13.) With the exception of the increase in total expense percentage in the second group of annual sales per employee, $8,000–$9,999, it was found that as annual sales per employee increased there was a definite downward trend in the total expense ratio to sales. Similarly, in salary and wage expense percentage the same tendency was observed. The decrease in salary and wage percentage was continuous and did not present the slight increase observed in the $8,000–$9,999

group, when total expense percentage was considered. Gross margin percentage did not present the same degree of regularity of decrease as the salary and wage percentage, but the tendency was evident.

TABLE 13.—*Gross margin, total expense, total wages, expenses other than wages and profit or loss according to average annual sales per employee in 129 individual retail meat markets, 1923*

[Amounts expressed as percentages of net sales]

Average annual sales per employee	Number of stores	Gross margin	Total expense [1]	Salaries and wages	Expenses other than salaries and wages	Profit [2]
Less than $8,000	8	24.04	24.29	16.60	7.69	−0.25
$8,000–$9,999	13	25.25	25.29	15.58	9.71	−.04
$10,000–$11,999	17	25.88	22.26	14.10	8.16	3.62
$12,000–$13,999	27	23.46	20.32	13.48	6.84	3.14
$14,000–$15,999	30	23.62	19.79	12.41	7.38	3.83
$16,000–$17,999	21	22.23	18.51	11.90	6.61	3.72
$18,000–$19,999	10	21.39	17.45	11.19	6.26	3.94
Over $20,000	3	18.76	14.82	8.24	6.58	3.94

[1] Interest on investment not included as an expense
[2] A minus (−) sign indicates a loss.

Stores in the first and second groups in which annual sales per employee were below $10,000 showed losses. In the remaining groups, the percentage of profit was fairly constant, ranging between 3.14 per cent and 3.94 per cent despite the general decrease in gross margin percentage previously mentioned. A corresponding decrease in total expense percentage resulted in the maintenance of a fairly constant rate of profit.

In Figure 3, the data of Table 13 are presented in graphic form. The total length of each bar represents total expense percentage. The downward trend of the total expense and salary and wage percentage as annual sales per employee increase is plainly demonstrated. It is an obvious conclusion that increased efficiency in the utilization of employees' time in retail meat establishments should materially reduce wage expense. Since wage expense constituted about two-thirds of total expense, any reduction in wage expense should be strongly reflected in total expense. In conformity with this viewpoint, a definite downward trend in the wage and total expense percentages was found to be present as annual sales per employee increased. (Fig. 3.) The relation between annual sales per employee and total expense was thus shown to be high.

The group of 53 unlimited-delivery stores in which the sales volumes ranged between $14,000 and $100,000 yearly was selected as a representative group for further study of the relation of utilization of employees' time to annual sales per employee and total expense. It was found in this group that the correlation between annual sales per employee and total expense percentage for this group of stores was −0.75, where −1 represented perfect inverse correlation of these two factors and where 0 indicated no agreement whatever.

There was thus indicated a definite, inverse relation, that is, as the average annual sales per employee were increased, decrease in

total expense percentage took place. The relatively high relation indicated definitely that in those stores where the average annual sales per employee were greater, lower total expense percentages would be found than in markets where the average annual sales per employee were low. Low average annual sales per employee thus implied high total expense percentages.

The analysis was next directed toward the determination of the possibility of the smaller meat dealer attaining high average sales per employee. Although there was some tendency for the larger average annual sales per employee to be found in the stores of higher sales volumes, the relation did not seem to be of great significance. The correlation of sales per employee and total sales of the market gave 0.45 where 1 indicated a perfect agreement, and where 0 indi-

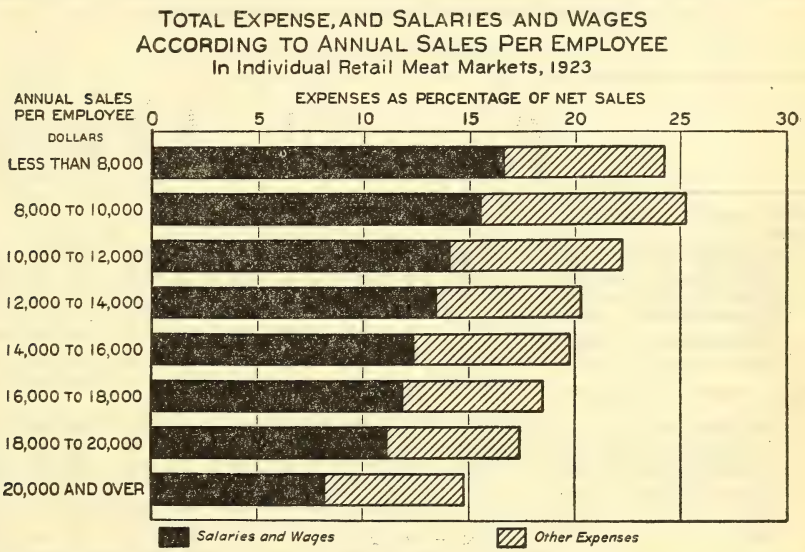

FIG. 3.—Salaries and wage expense as a percentage of net sales decreased as the annual sales per employee increased. As salaries and wage expense constituted approximately two-thirds of total expense when estimated wages for the proprietor were included, there was shown a tendency for total expense to decrease also with increases in the annual volume of sales per employee

cated no agreement. The relation was, therefore, relatively low and of only moderate significance.

The implication from this analysis is that in a number of stores of smaller volumes of sales the managements had been able to bring about efficient use of employees' time, thereby obtaining the benefits of the lower total expense ratios to sales, which resulted from the larger average sales per employee. Increased volume of sales in the market, then, is not necessarily accompanied by increased efficiency in the utilization of employees.

There thus appeared to be justification for the conclusion that, in this group of unlimited-delivery stores, increases in average annual sales per employee were to a great extent the result of efficiency of management. The significance of this conclusion lay in the fact that proprietors of some of the smaller stores were able through efficient utilization of employees to obtain lower operating expense

in relation to sales. Others through exercising careful employment of help might have reduced their operating expenses to lower percentage without increases in the total sales volumes of the markets.

MARGINS, EXPENSES, AND PROFITS COMPARED FOR 1923 AND 1924

In Table 14 data for individual retail meat markets are presented, from which profit and loss statements were obtained for both of the years, 1923 and 1924. These figures were limited in scope, but they served to compare the operation of identical stores for the two years and to relate the conditions observed in 1923 to 1924 conditions, thereby bringing the survey to a more recent date.

TABLE 14.—*Gross margins, expenses, profits, and losses in identical individual retail meat markets for the years 1923 and 1924*

[Amounts expressed as percentages of net sales]

	Number of stores	Gross margin	Profit [1]	Total expense	Salaries and wages	Rent	Wrappings	Refrigeration	Light and power	Depreciation	Other expense
Stores operated at a profit both years:											
Carry stores, 1923	18	23.99	5.08	18.91	12.13	2.31	1.16	1.03	0.23	0.47	1.58
Carry stores, 1924	18	24.53	5.56	18.97	12.12	2.37	1.20	1.06	.23	.46	1.53
Limited-delivery stores, 1923	10	23.33	3.80	19.53	13.10	2.20	1.06	.75	.31	.33	1.78
Limited-delivery stores, 1924	10	24.12	4.74	19.38	13.08	1.99	.97	.74	.33	.34	1.93
Unlimited-delivery stores, 1923	24	25.69	5.91	19.78	13.08	1.65	.80	.79	.28	.34	2.84
Unlimited-delivery stores, 1924	24	25.04	5.21	19.83	13.10	1.77	.84	.80	.26	.34	2.72
Stores operated at a loss both years:											
Carry stores, 1923	[2] 2	17.41	−1.64	19.05	11.40	2.51	1.11	.81	.23	.39	2.60
Carry stores, 1924	[2] 2	20.51	−.78	21.29	12.46	3.06	.99	.82	.23	.94	2.79
Limited-delivery stores, 1923	[2] 2	18.14	−2.16	20.30	13.10	1.30	.86	1.24	.29	.62	2.89
Limited-delivery stores, 1924	[2] 2	17.71	−1.85	19.56	12.53	1.47	.74	1.09	.26	.57	2.90
Unlimited-delivery stores, 1923	4	19.56	−3.04	22.60	14.79	1.83	.80	1.05	.23	.37	3.53
Unlimited-delivery stores, 1924	4	16.43	−5.96	22.39	13.49	1.64	.70	1.09	.25	.44	4.78
All stores: [1]											
Carry stores, 1923	25	23.56	3.67	19.89	12.72	2.62	1.17	.95	.26	.49	1.68
Carry stores, 1924	25	24.31	4.27	20.04	12.73	2.63	1.21	.97	.26	.52	1.72
Limited-delivery stores, 1923	18	22.16	1.92	20.24	13.45	2.12	1.08	.84	.36	.37	2.02
Limited-delivery stores, 1924	18	22.67	2.63	20.04	13.30	2.06	.98	.82	.38	.37	2.13
Unlimited-delivery stores, 1923	31	24.85	4.35	20.50	13.50	1.74	.86	.81	.29	.35	2.95
Unlimited-delivery stores, 1924	31	23.73	3.22	20.51	13.55	1.81	.84	.83	.28	.36	2.84
All groups: [3]											
1923	74	23.76	3.53	20.23	13.23	2.13	1.02	.86	.30	.40	2.29
1924	74	23.67	3.43	20.24	13.21	2.15	1.00	.87	.30	.42	2.29

[1] A minus (−) sign indicates a loss.
[2] The indicated results for this group have very limited value. See page 39.
[3] This grouping includes in addition to the group of stores operated at a profit or at a loss for both years stores incurring a profit one year and a loss the other.

For the purpose of comparison, the stores were divided into four general classifications: (1) Fifty-two stores operated at a profit for both years; this group was subdivided again according to carry, limited-delivery, and unlimited-delivery groups. (2) Eight stores operated at a loss for both years; this group of stores was again subdivided according to carry stores, limited delivery, and unlimited

delivery store groupings. (3) The 60 stores of the two previous groups, that is, those operated at a profit for both years and those operated at a loss for both years, were combined into a group which was subdivided according to carry stores, limited-delivery, and unlimited-delivery stores. (4) Seventy-four stores from which data were obtained for both years were combined into groups for the years 1923 and 1924, irrespective of whether the stores were operated at a profit during both years or at a loss for both years, or whether the stores incurred a profit for one year and a loss for the other year.

In the group of 52 stores operated at a profit for both years, gross margin percentage increased from 23.99 to 24.53 per cent in the carry group and from 23.33 to 24.12 per cent in the limited-delivery group between the years 1923 and 1924. In the unlimited-delivery groups a slight decrease from 25.69 to 25.04 was noted. Total expense percentages in all three groups were practically constant for both years. The slight variations noted were probably of little significance. Changes in gross-margin percentage were, therefore, reflected directly in changes in profit percentages.

The group of stores operated at a loss for both years was so limited in number that few conclusions could be drawn with respect to them. They were segregated in order that the profit stores which were probably more representative of actual operating conditions in the retail meat trade might be analyzed separately. However, when the stores operated at a profit or loss for both years were combined into a single group, the conclusions regarding changes in gross margins, total expense, and profit percentages in profit stores were not materially changed. The various percentages of expense retained about the same relation to net sales for both years.

In the final group, 74 stores were combined irrespective of whether they were operated at a profit or a loss both years, or at a profit one year and at a loss during the other year. The difference between these two groups of stores was negligible, and indicated no essential variations in margins, expenses, and profits between the two years, in so far as the groups of stores were concerned.

Comparison of the 74 stores shown in Table 14 with the 129 stores shown in Table 4 would seem to indicate that the 74 stores were fairly representative of the entire group secured for 1923. Gross margin percentage in the group for both 1923 and 1924 were slightly higher than in the group of 129 markets. This variation was introduced probably because the markets making up this group came largely from the northeastern and Pacific coast sections of the country, the central and southern sections being only partially represented.

The agreement was sufficiently close, however, to justify the conclusion that the group of stores from which data for both years were obtained was fairly representative of the entire group of individual retail meat markets, which formed the basis for the study of 1923 margins, expenses, and profits. For example, in 1923, gross margin percentage for the 74 stores in Table 14 was but 0.2 per cent higher than for the 129 stores in Table 4. The average total expense percentage of the stores in Table 14 was 0.32 per cent below that of the 129 stores in Table 4. Wages, rent, and wrappings percentages

varied slightly between the two groups. Refrigeration percentage was somewhat lower in the case of the 74 stores compared for 1923 and 1924.

This situation was due largely to the fact that the 1923 and 1924 comparative groups contained a number of stalls in public markets where central refrigeration plants materially reduced the cost of refrigeration to the individual dealer. Light, depreciation, and other expense percentages varied only to a small extent.

On the basis of these data, it was concluded that the changes in gross margin and total expense percentages were very slight between the years of 1923 and 1924. Furthermore, the comparison showed that conditions in 1923, which formed the basis of the study, were also applicable to 1924, and that while the major portion of analysis was based on 1923 data, the results might properly be regarded as pertaining equally well to 1924. The scope of the cost survey was thus extended to include the year 1924.

WAGES PAID TO CUTTERS

Considerable variation was found in the weekly wages paid to cutters in the retail meat trade. On the basis of the data collected, however, it was apparent that in the northeastern and central sections the average wage paid to cutters for the year 1923 was between $1,700 and $1,800 per year. In the southern section rather marked variations were observed in the three cities studied, but the average wages were definitely lower than those paid in any other section of the country and during 1923 were usually between $1,500 and $1,600 per year. In the Pacific coast section, the usual wages paid cutters were slightly over $2,000 per year, which was a higher average amount than was paid in any other portion of the country reached by the present survey.

COMPARISON OF MARGINS, EXPENSES, AND PROFITS WITH RESULTS OF THE CHICAGO, CLEVELAND, AND NEW YORK SURVEY

In 1923 the United States Department of Agriculture, in cooperation with Northwestern University, conducted a survey of margins, expenses, profits, and losses in the retail meat trade in Chicago, Cleveland, and New York. The period covered by the survey was between February, 1923, and March, 1924. Although the period covered by the cooperative survey and that of the present survey did not exactly coincide, it was believed that a comparison of the results of these two studies was proper and would be of value. This conclusion was strengthened by the fact that the data collected during the course of the present survey showed no material differences between the 1923 and 1924 figures, so that the February, 1923, to March, 1924, period of the Chicago, Cleveland, and New York survey might be properly compared with the January 1 to December 31, 1923, survey without introduction of variations through the lack of complete identity of the periods of the two surveys.

Data from 79 stores in 10 cities located in the northeastern and central sections of the country were used for comparison with the Chicago, Cleveland, and New York study. The cities comprised in this group were New Haven and Bridgeport, Conn., Binghamton,

N. Y., Baltimore, Md., Washington, D. C., St. Paul and Minneapolis, Minn., Lincoln, Nebr., Denver, Colo., and Cheyenne, Wyo. (See Table 15.)

TABLE 15.—*Gross margins, expenses, and profits in 143 individual retail meat markets in Chicago, Cleveland, and New York, and in 79 markets in 10 other eastern and central United States cities, 1923* [1]

[Amounts expressed in percentages of net sales]

Item	All stores		Profit stores		Loss stores	
	79 stores	143 stores	61 stores	85 stores	18 stores	30 stores
Cost of goods sold	77.6	77.1	76.6	76.1	80.6	79.1
Gross margin	22.4	22.9	23.4	23.9	19.4	20.9
Total expense [2]	19.5	19.5	18.8	18.7	21.9	23.8
Salaries and wages	12.8	12.5	12.3	12.0	14.6	15.0
Rent	1.8	2.2	1.7	2.0	1.9	3.3
Wrappings	.9	.8	.9	.8	1.0	.9
Refrigeration	.9	1.0	.9	1.0	.9	1.5
Other expense	3.1	3.0	3.0	2.9	3.5	3.1
Profit	2.9	3.4	4.6	5.2		
Loss					2.5	2.9

[1] Data for the 79 stores (61 profit and 18 loss) in the 10 cities (New Haven and Bridgeport, Conn., Binghamton, N. Y., Baltimore, Md., Washington, D. C., Minneapolis, Minn., St. Paul, Minn., Lincoln, Nebr., Denver, Colo., and Cheyenne, Wyo.), were collected during the course of the present study. The data for the 143 markets (which included the 85 profit and 30 loss store groups) in Chicago, Cleveland, and New York were obtained during a previous study made by the department in cooperation with Northwestern University.

[2] Interest on investment not included as an expense.

When the gross margin percentage of 22.4 for stores in the 10 cities was compared with those of stores located in Chicago, Cleveland, and New York, it was found to be 0.5 per cent lower in the 10 cities than in Chicago, Cleveland, and New York. Total expense was 19.5 per cent of sales in both surveys. The salary and wage percentage of 12.8 was higher in the 10 cities than in Chicago, Cleveland, and New York. Rent was 0.4 per cent lower in the 10 cities. This no doubt reflected the tendency toward lower rents in the smaller cities. Wrappings and refrigeration varied by 0.1 per cent each from the averages obtained in the survey of the 143 stores in Chicago, Cleveland, and New York. Other expense varied only 0.1 per cent, and profit was 0.5 per cent lower in the 10 cities than in the 3 cities.

Data for 85 profit and 30 loss stores were presented in the report of the Chicago, Cleveland, and New York survey, whereas the survey in the 10 cities in the northeastern and central sections included 61 profit and 18 loss stores.

Comparison of the gross margin percentage in the 61 profit stores in the 10 cities with that of the 85 profit stores in Chicago, Cleveland, and New York disclosed that the 0.5 per cent difference previously indicated was also shown by the profit store group. Total expense varied by only 0.1 per cent. Wage percentage in the 10 cities group was 0.3 higher. Rent percentage was lower in the 10 cities than in the 3 cities, wrappings, refrigeration, and other expense percentages showed slight variations, profit percentage was 0.6 per cent lower in the 10 cities than in Chicago, Cleveland, and New York.

In the loss store groups tendencies toward high expense and low gross margin percentages were exhibited. In this respect the general tendency toward low gross margin and high expense percentages in loss stores was of more significance than the actual numerical differences presented by the data.

The extent of the differences in percentages noted between the results of these two surveys probably did not constitute an accurate measure of the variation. The closeness of agreement between the results, however, seemed to imply that representative data had been obtained in both surveys. Some variation was introduced no doubt through differences in the size and nature of the retail businesses composing the groups in the two surveys.

COMPARISON OF MARGIN, TOTAL EXPENSE, AND PROFIT IN INDIVIDUAL RETAIL MEAT MARKETS FOR 1919 AND 1924

In 1919 the department conducted a nationwide survey of conditions in the retail meat trade.[5] A portion of this study was concerned with margins, expenses, and profits in 206 individual retail meat markets located in various sections of the United States. To compare the results of these two surveys, it was necessary to correct the results for variation in the retail price level of meats and for differences in the value of the dollar between the years 1919 and 1923. The elimination of these differences resulted in the reduction of the percentages for both years to the common basis of 1913. It was then possible to determine the extent of any variations between the two years in terms of a common unit of measure, the 1913 dollar, since differences in the retail price level of meats and in the general price level had been eliminated.

For comparative purposes, the system of weighting averages used in the 1919 survey was applied to the results obtained in the present survey. This system involved weighting the results according to the comparative quantities of meats sold in stores of varying sizes and by population distribution, because of the variations in operating expense between the several sections of the country. The same weights used in the 1919 survey were applied to the 1923 figures. It was believed that little variation had taken place in the proportions of meats moving through stores of varying volumes of sales during the period between 1919 and 1923. If such changes had taken place, they were insufficient to alter the rather broad weights established for the purpose of the 1919 survey.

Use of these weights resulted in some change in the gross margin, total expense, and profit percentages for 1923, so that the percentages presented in Table 16 are not the same as those shown in Table 4. These differences in two instances amount to approximately 1 per cent. The principal differences were noted in the carry group, where the weighted average gross margin was found to be 22 per cent of sales, whereas the unweighted average was 22.98 per cent, an increase of 0.98 per cent. The weighted expense percentage was 18.64, unweighted 19.74, a difference of 1.1 per cent. Variation in the rate of profit was slight, since gross margin and total expense percentages varied about the same amount between the weighted

[5] See footnote 3.

and unweighted figures. The weighted profit percentage was 3.36 and the unweighted, 3.24, a decrease of 0.12 per cent in the unweighted.

TABLE 16.—*Comparison of margins, expenses, and profits in individual retail meat markets for 1919 and 1923* [1]

Item	Year	1919 and 1923 values at retail of meats of $100 retail value in 1913 [2]	1919 and 1923 margins, expenses, and profits expressed as percentages of sales for each year	1919 and 1923 margins, expenses, and profits incurred in selling meats worth $100 in 1913	1919 and 1923 margins, expenses, and profits corrected to 1913 basis
			Per cent		
Carry stores:					
Gross margin	1919	$184.00	17.90	$32.94	$17.71
Do	1923	149.00	22.00	32.78	18.11
Total expense	1919	184.00	15.01	27.62	14.85
Do	1923	149.00	18.64	27.77	15.34
Profit	1919	184.00	2.89	5.32	2.86
Do	1923	149.00	3.36	5.01	2.77
Delivery stores:					
Gross margin	1919	184.00	19.63	36.12	19.42
Do	1923	149.00	23.84	35.52	19.62
Total expense	1919	184.00	16.81	30.93	16.63
Do	1923	149.00	21.28	31.71	17.52
Profit	1919	184.00	2.82	5.19	2.79
Do	1923	149.00	2.56	3.81	2.10

[1] The 1919 figures used here are from the results of a survey of the retail meat trade conducted by the department. The same methods of weighting used in determining the 1919 averages have for the purposes of this comparison been applied to the averages determined in the 1923 study. The averages for 1923, therefore, will not be the same as those shown elsewhere in this publication. The total expense and profit figures shown here for 1919 vary from those published in Department Bulletin No. 1317, as interest has been subtracted from expense and added to profit. Also the limited and unlimited delivery groups for the 1923 survey have been combined into one general delivery group, in order that comparison might be made with the averages of the delivery group for 1919.

[2] Based on the Bureau of Labor Statistics Annual Indices of Retail Meat Prices.

Variation between the weighted and unweighted gross margin and total expense percentages in the delivery group for the year 1923 were not as wide as those of the carry group. The weighted and unweighted gross margin, total expense, and profit percentages follow, the weighted percentages being stated first: Gross margin, 23.84 and 23.81; total expense, 21.28 and 20.90; and profit 2.56 and 2.91.

Gross margin, total expense, and profit percentages were the items compared for the two surveys. The primary means of comparison was the annual index of retail meat prices for the United States, prepared by the Bureau of Labor Statistics of the Department of Labor. The commodities included in this index are sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb. In this index, the cost at retail of certain quantities of these commodities equaled 100 in 1913. On the basis of this index, the 184 shown as the index of retail meat prices for 1919 may be interpreted as meaning that a quantity of these cuts of meat selling for $100 at retail prices in 1913 had a value of $184 in 1919, whereas for the year 1923 the corresponding value had declined to $149.

The index of retail meat prices for each year was considered as expressed in dollars and was multiplied by the average gross margin percentage in carry stores for each year. The average gross margin percentage in carry stores during 1919 was 17.9 per cent of net sales.

The similarly weighted margin percentage for stores of the same class for the year 1923 was 22 per cent of sales. The results so obtained for 1919 and 1923 were $32.94 and $32.78. These amounts represented for each of these years the retailer's average gross margin for handling and selling meats of a retail value of $100 in 1913.

These amounts were, however, expressed in dollars of different purchasing power, since the general price level changed between 1919 and 1923. In order to make comparison between these two amounts it was necessary to correct for this difference in purchasing power. When an index of the general price level [6] was applied to the two amounts, $32.94 and $32.78, thus referring to them to a common base, it was found that on the 1913 basis the gross margins became $17.71 for 1919 and $18.11 for 1923, a difference of 40 cents. This was an increase of 0.4 per cent on sales when based on 1913 retail values. The significance of this fact was that between 1919 and 1923 the average gross margin, as determined through the medium of these two surveys, increased but 0.4 per cent, when related to a common base (1913).

Variation in stores from which data were obtained and other minor factors rendered it impossible to conclude that there was an absolute increase of 0.4 per cent in the gross margin percentage. The close agreement of the figures, however, did lead to the conclusion that between 1919 and 1923 but little change took place in the gross margin of carry stores, when corrections for variations in the level of retail meat prices and in the general price level were made.

When total expenses in carry stores were similarly treated, it was found that between 1919 and 1923 the increase was 49 cents, an amount which was in close agreement with the 40-cent increase observed in gross margin. It would appear, then, that the increase in gross margin had been only sufficient to meet increases in total operating expenses.

In carry stores the profits for 1919 and 1923 on meats of $100 retail sales value in 1913 were $2.86 and $2.77, respectively, when the profits for both years were expressed in terms of 1913 dollars.

For the purpose of comparison with the results of the 1919 survey, the limited-delivery store class and the unlimited-delivery store class of the 1923 survey were combined and weighed according to the 1919 survey methods, since delivery stores in the 1919 survey were not divided according to these subdivisions. When all values were expressed in terms of the 1913 dollar, and were referred to a quantity of meats of retail value of $100 in 1913, the gross margin for 1923 showed an increase of 20 cents over the 1919 margin. Total expense for delivery stores in 1923 was 89 cents greater than in 1919, and profit showed a decrease of 69 cents.

The significance of the exact numerical differences indicated by these comparisons may or may not have been important. It was previously pointed out that slight variations in methods of procedure in the collection of data might, together with variations in the groups of stores and cities from which data were secured, limit the value of any absolute numerical comparison. However, it was of

[6] Federal Reserve Bank of New York. Index of the General Price Level.

significant importance to note that in both carry and delivery stores a slight increase in gross margin percentage and a greater increase in total expense percentage were observed. In neither group of stores was the gross margin increase equal to the indicated increase in total expense. This resulted in lower profits in both classes of stores in 1923, when corrections had been made in the figures for variations in price levels and in the purchasing power of the dollar.

The fact that the changes found in gross margin and in total expense in carry and delivery stores were relatively small, and appeared as slight increases only in both of the store groups, would seem to point definitely to the conclusion that only slight increases in retailing costs had taken place between 1919 and 1923, when gross margin and total expense were measured by a common unit.

The cost of retailing as brought out by the comparisons remained practically constant, with the exception of possible slight increase between 1919 and 1923. The increased percentage relation of gross margin, expenses and profits to sales arose, then, very largely from declines in the retail price level of meats, while the actual cost of maintaining retail meat establishments remained at least constant. With the decrease in retail prices on meat and meat products, which took place between 1919 and 1923, the relative proportion of the consumer dollar taken by the retailer of meats increased, because there was no reduction in his actual operating expenses.

The comparison between 1923 and 1919 was made on the basis of 1923 data. The results of the comparison between the 1923 and 1924 data of the present survey shown in Table 14 led to the further conclusion that the actual cost of retailing meat had not materially changed between 1919 and 1924, since the present survey indicated that there were no differences of importance between 1923 and 1924.

STOCK TURN

The annual rate of turnover of the stock of merchandise in some retail businesses other than the retail meat business is important because of the capital invested in inventory. As the amount invested in merchandise inventory increases and the annual rate of turnover decreases, the interest expense for the capital invested in inventory may become of importance as an expense factor.

In the retailing of meat this does not hold true. In 1923, the investment in merchandise inventory for individual retail meat markets amounted to about 1 per cent of the net sales and the usual rate of turnover was between 80 and 90 times per year. It is readily seen that in a store in which the annual volume of net sales was $40,000, the investment in merchandise inventory approximated $400. Increasing or decreasing the rate of turnover of this small amount of capital will not affect the interest charge for capital invested in inventory to any material extent. Any interest saving obtained through the reduction of inventory or through a more rapid turnover of the capital invested in inventory would not affect total expense appreciably, if interest were included as an expense.

It is obvious that in the retail meat trade rapid turnover in perishables is especially desirable and to this extent rapid turnover is of

vital importance to the proprietors of retail meat establishments. Shrinkage and deterioration in salability arising from inadequate refrigeration facilities or from holding fresh meat too long, are much more important to the retail meat dealer than the actual rate of turnover of the capital, which he has invested in his inventory of perishable fresh meat and meat products.

EQUIPMENT INVESTMENT

The percentage relation of the total investment in equipment to net sales in carry stores was 5.76 per cent, in limited-delivery stores, 4.85 per cent, and in the unlimited-delivery group, 6.67. These percentages reflected the variations in equipment investment to be found among these three classes of stores.

In analyzing the differences in shop-equipment investment the carry class and unlimited-delivery class were used. Stalls in public markets were excluded, since in some instances the investment in these stalls was much less than that required where the meat market was operated as a straight meat market outside of public markets. The average shop equipment investment in carry group of stores was found to be 6.97 per cent of net sales, and in the unlimited-delivery stores the average equipment investment was 6.49 per cent of net sales. The equipment investment in carry stores was usually more extensive than in delivery stores, owing to the fact that the carry stores depended to a greater extent on general attractiveness in appearance to draw trade.

SEMIWHOLESALE STRAIGHT MEAT MARKETS

Meat stores whose wholesale activities exceeded 30 per cent of their total volumes of business were classed as semiwholesale markets. Data were collected from a few stores of this type, but the records kept by such stores were inadequate for a study of their costs of retailing meat. No separate records of retail or wholesale sales were kept in most stores. If separate records of retail and wholesale sales were available, the determination of the cost of goods sold at wholesale and at retail was an impossibility. It was, therefore, not possible to determine a gross margin percentage for the retail portion of the business. Lacking this essential figure, a profit-and-loss statement could not be prepared for the retail portion of the business.

The semiwholesale markets invariably showed much lower gross margins and expenses than retail markets. The volume of business per employee was larger because of larger purchases made by customers in semiwholesale markets. The comparative gross margins, expenses, and profit percentages for a group of nine straight semiwholesale meat markets, whose sales in 1923 totaled $947,475, or an average of $105,275 per market, are arranged for presentation in Table 17.

TABLE 17.—*Margins, expenses, and profits in semiwholesale straight meat markets, 1923–1924*

[Amounts expressed in percentage of net sales]

Item	9 markets [1]		8 markets [1]	
	1923	1924	1923	1924
Gross margin	13.56	14.59	13.99	14.09
Total expense [2]	11.01	11.14	10.95	10.81
Profit	2.55	3.46	3.04	3.28
Salaries and wages	7.84	7.73	7.83	7.50
Rent	.70	.72	.69	.67
Wrappings	.28	.34	.26	.30
Refrigeration	.33	.38	.34	.38
Light and power	.14	.17	.11	.13
Depreciation	.12	.12	.12	.12
Other expense	1.60	1.69	1.59	1.71
Delivery wages [3]	1.44	1.49	1.41	1.42
Other delivery expense [4]	.90	.96	.87	.96

[1] One market included in the group of 9 stores was operated at a loss in 1923 and at a profit in 1924. This store was not included in the tabulation of the 8 stores.
[2] Interest on investment not included as an expense.
[3] Included in salaries and wages.
[4] Included in other expense.

One of these 9 markets operated at a loss in 1923 and at a profit in 1924. The variation in margin for this store between the two years was 8 per cent, so that it was thought best to eliminate it from further consideration. Final comparison was made between 8 stores, whose operations were similar for both years. This group of 8 includes 6 stores operated at a profit for both years and 2 operated at a loss for both years. The loss stores showed a slightly lower gross margin percentage than the profit stores, which was similar to the differences observed in the analysis of individual retail meat markets.

An inspection of the expenses of these wholesale markets indicated that their average gross margin for the two years was about 14 per cent of sales. These markets were all of the delivery type, so that an approximate comparison may be made with the unlimited-delivery group of individual retail stores. (Table 4.) It will be noted that the gross margin percentage was approximately 10 per cent lower in the semiwholesale group than in the individual retail unlimited-delivery group. Delivery expense percentage was also lower. Wage expense in the semiwholesale group for 1923 was 7.83 per cent of net sales, and in the individual retail unlimited-delivery group 13.41 per cent. Rent, wrappings, ice and refrigeration, light and power, depreciation, and other expenses, all expressed as percentages of net sales, were much lower in the semiwholesale stores than in the unlimited-delivery group. The average rate of profit in the semiwholesale group for 1923 was 3.04 per cent of net sales, whereas in the unlimited-delivery retail group it was 3.23 per cent of net sales.

Comparisons made between these two groups were considered only as approximations, since the group of semiwholesale stores was few in number and was not to be regarded as representative of the entire group of such operators. The figures from semiwholesale markets must be regarded as composite averages of the retail and

wholesale phases of each business, and of no significance in a study limited to the cost of retailing meats, since margin and expense percentages could not be determined separately for the retail portions of these businesses.

COMBINATION STORES

Numerically, combination stores were found to be important in the distribution of meats, but difficulties of a somewhat similar nature to those met in the semiwholesale group were encountered in studying costs of retailing in this group of stores. Records of purchases and sales of meats and groceries were so infrequently kept separate that, in many instances where otherwise fair records were available, it was impossible to determine separate gross margins for meat and for groceries. Lacking this, it was impossible to determine a profit or loss figure or to draw any conclusions concerning the relative profitableness of the two or more departments of each of these combination businesses.

Proprietors of combination stores should recognize the fact that knowledge of the comparative profits received from the different departments of the business would be of very great value in the conduct of their businesses.

In most instances observed during the course of the survey, and this applied to the smaller stores particularly, no attempts were made to keep separate any sales and purchase information for meats and groceries. A few stores were found where there seemed to be a possibility of dividing expenses between meats and groceries, but the data so collected were too limited to present in table form.

Data were obtained from 14 combination stores and profit and loss statements were prepared for the meat departments of these 14 stores. Eleven stores of the group were credit and delivery stores of varying volumes. In so far as these very limited data applied, 6 of a total of 8 stores with meat sales below $41,000 showed losses. The other 2 stores showed profit percentages of slightly over 1 per cent. The larger combination stores, 3 in number, exhibited a tendency toward decreasing margin and expense percentages as volumes of sales increased. Margin percentages for the entire 11 combination stores were about the same as those in individual retail markets of the unlimited-delivery class in the sections of the country in which these combination stores were located.

In the meat departments of the three carry combination stores located in the central section of the country, margin and expense percentages were practically the same as those of carry straight meat markets in the same section. Rates of profit were similar to those in carry straight meat markets.

It was observed in a very limited number of cases that where the volume of meat sales was below $41,000, the grocery department made the profit for the business. In a single instance, it was observed that when the volumes of both departments became large in amount it was the meat department which carried the business and enabled it to show a profit. In this particular case, the margin on groceries was lower than the average percentage margin determined for stores of similar sales volumes and the margin on meats was higher than in straight meat markets of about the same sales volumes of meats.

RETAIL CHAIN STORES

The chain-store data collected during this survey were almost entirely limited to the cities in which figures from individual retail meat markets were obtained.

Data were obtained from a few chain-store units, which were operated outside these cities, but the number of such was small. It was not intended that a survey should be made of chain-store operations, but rather that only such information should be collected as would permit of an approximate comparison with individual stores operating in the same localities. The chain-store data collected were, therefore, exceedingly limited, and served to show the operation of individual chain stores rather than of the chain-store group as a whole.

STRAIGHT MEAT MARKETS

Data covering the operation of four stores of a straight meat carry chain-store system during 1923 are presented in Table 18. For obvious reasons the sales volumes and location of these stores are not given. The gross margin percentages of these stores were slightly higher than those of individual retail meat markets. Total expense percentages were lower in stores B and C than in individual carry stores of the same volumes of sales and located in the same section. In stores A and D, total expense percentages were about the same as in individual carry stores of the same sales volumes.

TABLE 18.—*Margins, expenses, and profits in four units of a straight meat chain-store carry system, 1923* [1]

[Expressed as percentages of net sales]

Item	Store A	Store B	Store C	Store D
Gross margin	23.13	23.51	22.67	28.16
Total expense	20.46	15.96	15.55	18.59
Profit	2.67	7.55	7.12	9.57
Shop wages	9.78	7.17	8.07	9.16
Rent	2.89	2.17	1.34	3.52
Wrappings	1.19	.96	.91	1.31
Refrigeration	1.44	.65	.69	.48
Light and power	.36	.21	.24	.13
Depreciation	.27	.23	.26	.32
Telephone	.25	.21	.10	.12
Laundry	.35	.17	.21	.32
Advertising	1.19	1.51	1.24	1.85
Other expense	2.74	2.68	2.49	1.38

[1] Stores arranged in order of increasing sales volumes. Store A had the smallest sales volume.

The effect of increasing volume in decreasing margin and expense percentages was observed in the cases of stores A, B, and C. The figures of store D were not altogether comparable with the other three stores. This store was located in an important section of the city, where rents were higher but where the possibilities of attracting trade through an accessible location were good. The higher cost of obtaining this additional business was plainly apparent from the increased expense ratios. Wages, rent, wrappings, depreciation, and advertising all showed the relatively greater expenditures required in order to attract trade to this store.

COMBINATION CHAIN STORES

Data from a combination chain-store carry system indicated a slightly higher percentage gross margin for meats than was found in individual carry stores of the same locality. The margin on groceries in the same chain was about 0.3 per cent below that determined by the Harvard Bureau of Business Research for individual retail grocery stores in 1923.[7]

When the expense percentages from a group of stores selected at random from this chain were analyzed, it was found that meat departments in the stores whose annual volumes of sales were under $14,000 were operated at a loss. In the stores in which volumes of sales were above $14,000 yearly, expense percentages were under the average amount, so that relatively high percentages of profit were shown.

The meat departments of the stores of this chain exhibited the wide fluctuations in margin percentage similar to those observed in the case of individual stores. As a group, the average gross margin percentages on meats were above that noted in individual carry stores handling meats only.

A second group of chain stores of the combination carry type located in another section of the country was represented in the data. Gross-margin percentages on meats in this group showed but little variation and averaged over 2 per cent lower than individual retail meat stores of the carry class located in the same area. However, the average total expense percentage in these stores was below that of the individual carry stores, so that the average percentage of profit received from the operation of the meat departments in the chain stores was about 1 per cent below that of the individual carry stores of the same area.

SEMIWHOLESALE AND RETAIL CHAIN MEAT MARKETS

Data were obtained for the 1923 operation of 32 meat markets owned by three meat-packing concerns and for 31 of these markets for the year 1924. Of the 32 markets from which data were obtained for 1923, 11 were reported to have been of the retail type and 21 of the semiwholesale type.

This number of stores included practically all of the retail meat markets owned and operated by these meat packers in the State of Washington, together with a large proportion of the semiwholesale markets also owned and operated by these packers. The number of stores though apparently small was, therefore, thoroughly representative of this phase of meat distribution in this section of the country. So far as known, this is the only part of the country in which meat packers have entered the retailing of meat so extensively.

It was necessary to depend upon estimates of the proportions of each business given over to retail and to wholesaling activities, as no records were available by which the actual retail and wholesale sales in each market might be determined. The variability in margin and expense percentages at times may have been accounted for by errors in the estimates of retail and wholesale business, as increased

[7] Graduate School of Business Administration, Harvard University, Bureau of Business Research, Bul. No. 41: "Operating Expenses in Retail Grocery Stores in 1923."

wholesaling tends to decrease gross margin and expense percentages in semiwholesale markets.

Department representatives were informed that prices charged for meat handled through these retail and wholesale outlets were entered in the books of the companies at the same rates charged to bona fide purchasers of the companies' products. Therefore, gross margin percentages of these packer-owned markets were comparable with those in markets owned by other agencies.

An important limiting factor in the comparison between stores operated by meat packers and those operated by others was the small number of packer-owned retail markets available. There were present in this group of stores, as in all other groups of stores, the wide divergencies in cost of operation, which render comparisons based on few cases of minor value.

As no significant differences were noted in the profit and loss statements for each of the stores for the two years 1923 and 1924, the analysis was confined to the 1923 data. It should be understood that there were minor variations in margin and expense percentages between the two years, but in general the agreement between the data for the two years exhibited approximately the same degree of agreement found in the case of the 74 individual retail meat markets from which data were obtained for both the years 1923 and 1924.

PACKER-OWNED RETAIL MARKETS

The total number of packer-owned retail meat markets indicated by the estimates for the year 1923 was 11. Of these 11 stores, 3 were of the carry type and 8 were of the delivery class.

The average gross margin for 11 Pacific coast carry stores, not packer-owned, was 25.37 per cent of net sales. In the 3 packer-owned carry stores, gross margin amounts were 22.89, 21.14, and 20.35 per cent of net sales. In the market in which the 22.89 per cent margin occurred, the percentage expense of doing business was 6 and 11 per cent of sales under the expense shown for the remaining two packer-owned stores, so that there seemed to be definite justification for not considering this store as a representative packer-owned carry store. In its expense percentage, it seemed to be of the semiwholesale class. The gross margin percentages in the three packer-owned markets were from about 2.5 to 5 per cent under the average of 25.37 per cent in retail markets not owned and operated by packers.

The remaining two packer-owned carry stores, whose locations were such that it was believed that comparison might be properly made with results obtained in cities where individual retail meat stores were studied, showed gross margin percentages from 5 to 6 per cent below the average indicated for retail stores of the same size and type of business in San Francisco and Seattle. The indicated expense of operation for stores of the same size as these two packer-owned stores was 24.73 per cent of sales, whereas the packer-owned stores showed expense percentages of 24.16 and 19.88.

The first-mentioned percentage was thus in close agreement with the average percentage of stores not packer owned. The variation noted in the case of the packer-owned store for which a percentage expense of 19.88 was reported was equaled by stores owned by other

agencies, so that it was not possible to state which group of stores was operating the more economically.

It has already been stated that gross margin percentages in the packer-owned stores seemed to be lower than in other stores, and expense percentages also showed some variation. It was of interest, also, to examine profit rates shown for the packer-owned stores. In one of these markets, a loss of 3.02 per cent was indicated and in the other a slight profit of 0.47 per cent of sales was shown.

In the delivery group of stores not packer-owned the average gross margin in markets, where the volume of sales ranged between $25,000 and $50,000, was 27.80 per cent in Seattle and San Francisco and the average total expense was 22.82 per cent of sales. There was thus indicated a profit of 4.98 per cent.

In 6 packer-owned markets of the same size and type, gross margin, total expense and profit percentages were as follows: Store A, 19.37, 19.28, and 0.09; store B, 17.81, 19.48, and a loss of 1.67; store C, 18.04, 17.47, and 0.57 profit; store D, 19.71, 21.42, and 1.71 loss; store E, 29.95, 25.88, and 4.07 profit; store F, 26.01, 21.67, and 4.34 profit. There were thus two stores, E and F, which approximated the average percentages of stores not packer-owned. In the remaining 4 stores, margin percentages were low, and in 3 of the stores, A, B, and C, expense percentages were also low. However, in the 4 stores with low gross margin percentages, 2, B and D, operated at a loss of almost 2 per cent each and the remaining 2, A and C, operated at low rates of profit, 0.09 and 0.57 per cent.

Six of the packer-owned delivery stores have been mentioned. A seventh, with an annual volume of sales under $25,000, was conducted at a gross margin percentage of 24.66, total expense percentage of 20.20, and a profit of 4.46 per cent. The eighth of these stores was operated at a gross margin percentage of 17.89, total expense percentage of 15.68, and a profit of 2.21.

A summary of the operation of these 11 packer-owned retail stores indicated that 3 were operated at gross margin percentages which approximated those of stores of similar size not owned by packers. In 5 of the 11 stores the cost of operation was similar to that in markets of similar size and type owned by agencies other than the meat-packers and in 6 of the 11 stores actual losses were incurred or profits were less than 1 per cent of sales.

PACKER-OWNED SEMIWHOLESALE MARKETS

Twenty-one of the markets for which data were obtained for 1923 were reported to be of the semiwholesale character. In all of these markets some retailing was done, but retail and wholesale sales amounts were not kept separate. Neither were the costs of goods sold at retail and at wholesale available separately, so that no study could be made of the group from the standpoint of cost of retailing. In this respect, they were similar to the semiwholesale markets previously discussed, with the exception that these packer-owned markets functioned in some cases as branch houses for distribution of meats to other dealers. As sources of information regarding the cost of retailing by packers, such stores were of no

value, since the wholesale and retail phases of the businesses could not be separated.

Of the 21 semiwholesale markets, 9 showed losses when operating expenses were deducted from gross margins. An additional 5 showed a profit of less than 1 per cent of net sales in each case. The remaining 7 markets made profits as follows: 6 between 1.95 and 3.04 per cent and 1 made a profit of 8.05 per cent.

Stated in percentages of the total number of stores of this type, 43 per cent of the total, 21 semiwholesale markets operated at a loss, 24 per cent returned a profit of less than 1 per cent, and 33 per cent showed profits of 1.95 per cent or greater on net sales.

TABLE 19.—*Individual retail meat dealers furnishing accounting information for 1923 and 1924 classified by cities, sales volumes, and classes of service*

Section and city	Sales less than $14,000			Sales between $14,000 and $25,000			Sales between $25,001 and $50,000			Sales between $50,001 and $100,000			Sales over $100,000			Total			Total all classes
	Carry	Limited delivery	Unlimited delivery	Carry	Limited delivery	Unlimited delivery	Carry	Limited delivery	Unlimited delivery	Carry	Limited delivery	Unlimited delivery	Carry	Limited delivery	Unlimited delivery	Carry	Limited delivery	Unlimited delivery	
1923																			
Northeast:																			
New Haven, Conn	---	---	---	---	1	---	1	---	---	1	---	---	---	---	---	2	1	---	3
Bridgeport, Conn	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	1	---	1	2
Binghamton, N. Y	---	---	---	---	---	1	---	---	1	---	2	1	---	1	1	---	3	4	7
Baltimore, Md	1	---	---	3	---	1	---	---	2	2	---	3	---	---	1	6	---	7	13
Washington, D. C	5	3	---	2	1	---	1	4	6	---	---	3	---	---	1	8	8	10	26
Central:																			
Minneapolis, Minn	1	---	---	---	---	---	1	2	1	2	1	7	---	---	2	4	3	10	17
St. Paul, Minn	---	---	---	---	---	---	1	---	2	---	---	1	---	---	---	1	---	3	4
Lincoln, Nebr	---	---	---	---	1	1	---	---	---	---	---	---	1	---	1	1	1	2	4
Denver, Colo	1	---	---	1	---	---	3	1	2	1	2	---	---	2	---	6	5	2	13
Cheyenne, Wyo	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	1
South:																			
Birmingham, Ala	---	---	1	---	---	---	---	---	---	---	---	2	---	---	---	---	---	3	3
Jacksonville, Fla	---	---	---	1	---	1	---	1	1	---	---	1	---	---	---	1	1	3	5
New Orleans, La	1	---	---	---	---	1	4	---	1	---	---	1	---	---	---	5	---	3	8
Pacific coast:																			
Seattle, Wash	---	---	---	1	2	---	2	4	1	2	3	3	1	3	---	6	12	4	22
San Francisco, Calif	---	---	---	---	---	---	2	---	2	---	---	7	3	---	---	5	---	9	14
Total	9	3	1	8	5	5	17	12	19	8	8	29	5	6	7	47	34	61	142
1924																			
Northeast:																			
New Haven, Conn	---	---	---	---	1	---	1	---	---	1	---	---	---	---	---	2	1	---	3
Bridgeport, Conn	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	1
Binghamton, N. Y	---	---	---	---	---	1	---	---	1	1	---	---	1	---	1	2	---	3	5
Baltimore, Md	1	---	---	2	---	1	---	---	1	2	1	2	---	---	1	5	1	5	11
Washington, D. C	3	2	---	1	3	---	1	5	5	---	---	2	---	---	2	5	10	9	24
Central:																			
Lincoln, Nebr	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	1
Denver, Colo	2	---	---	2	---	---	2	1	1	1	---	---	---	1	---	7	2	1	10
Cheyenne, Wyo	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---	1
South:																			
Birmingham, Ala	---	---	1	---	---	1	---	---	---	---	---	1	1	---	---	1	---	3	4
New Orleans, La	1	---	2	---	---	2	1	1	2	---	---	1	---	---	1	2	1	8	11
Pacific coast:																			
Seattle, Wash	---	---	---	1	1	---	3	6	2	3	3	1	1	3	---	8	13	3	24
San Francisco, Calif	---	---	---	---	---	---	2	---	3	1	---	7	3	---	---	6	---	10	16
Total	7	2	3	6	5	5	12	13	15	9	4	15	6	4	5	40	28	43	111

SUMMARY

Between the years 1923 and 1924 there were no significant changes in the percentage relations of gross margins and expenses to net sales in retail meat markets.

In percentages of net sales, gross margin, expenses, and profits during the year 1923 for the individual retail meat stores studied in Chicago, Cleveland, and New York agreed closely with those of markets in 10 other cities located in the northeastern and central sections of the country.

When gross margins, expenses, and profits in individual retail meat markets for the years 1919 and 1923 were related to a common base (1913), it was found that the absolute cost of retailing meat had changed only slightly. Slight increases in gross margin and total expense in relation to net sales were found. As these increases usually amounted to less than 0.5 per cent of sales in terms of 1913 dollars, there seemed to be evidence that the cost of retailing in the two years had remained practically constant. The percentage fluctuations which had been observed in gross margins, expenses, and profits between the years 1919 and 1923 were thus due to decreases in the general level of retail meat prices, rather than to changes in meat retailers' actual operating costs.

Of a total of 142 individual retail meat markets, 76 or 53.5 per cent of the total number returned to their proprietors as wages, interest, and profit less than $3,500 for the year 1923.

Gross margin and total expense percentages in relation to net sales were greater in credit and delivery retail stores than in retail stores of the cash-and-carry type.

Loss stores showed higher expense and lower gross margin percentages in terms of net sales than profit stores.

Increasing inefficiency in retail management was indicated by increases in expense and decreases in gross margin in relation to sales as the tendency toward loss became more evident.

The number of employees in retail stores operated at a loss was greater on the average than in profit stores of similar volumes of sale.

Retail stores with the larger average annual sales per employee were operated at lower expense ratios. Increasing sales per employee and efficient utilization of employees' time were effective means of reducing total expense.

No very pronounced relation was indicated between average annual sales per employee and total sales volumes of retail markets. Efficient proprietors of some of the smaller, as well as proprietors of larger retail stores were thus able to obtain a low percentage operating cost through increased sales per employee, which implies efficient utilization of employees' time.

Large sales volumes in individual retail meat markets did not always result in a low total expense in percentage of net sales, while increased average sales per employee showed a very definite tendency toward decrease in the percentage relation of gross margin and total expense to net sales.

Delivery cost as a percentage of delivered sales amounted to about 5 per cent.

Almost 27 per cent of the 142 individual retail meat markets of all types of stores and volumes of business were operated at a loss when wages for proprietors were included in total expense.

In 10 of 13 stores where annual sales were less than $14,000, losses were incurred. It was apparent that in such small-sized stores the total amounts returned to the proprietors from the operation of their businesses generally were not equal to the wages usually paid meat cutters.

Of 129 individual retail meat markets where the annual volumes of sales were over $14,000, 21.7 per cent of the stores were operated at a loss when proprietor wages were included in expenses. An additional 30.2 per cent of this group of stores returned to their proprietors a profit of less than 3 per cent of sales. In 27.1 per cent of the stores profits were between 3 per cent and 6 per cent, and in 14.7 per cent of the group profits were between 6 per cent and 9 per cent. In the remaining 6.3 per cent of the group, profits were 9 per cent or more.

Gross margins in percentage of sales averaged lowest in the northeast section of the country and highest in the Pacific coast section.

Total-expense percentages in carry stores averaged lowest in the northeast section and highest in the Pacific coast section. In unlimited-service stores, total expense percentages were lowest in the northeast section and highest in the southern and Pacific coast sections.

In 5 of 11 chain retail meat stores owned and operated by meat packers in the State of Washington, the percentage cost of operation was similar to the cost of operation in retail meat markets of similar size and type owned by agencies other than meat packers. In 6 of these 11 stores either actual losses were incurred or profits were less than 1 per cent of sales. In 3 of the 11 stores gross margins approximated in percentage of sales those of markets owned by other agencies, and in the remaining 8 stores the margins tended to be lower than in retail markets owned by other agencies.

Accounting records in the small and medium-sized retail meat markets were for the most part inadequate for a determination of profit. In some cases, charges relating to the personal affairs of the proprietor were found to be combined with figures presumably related to the business only.

Proprietors of combination meat and grocery businesses did not generally recognize the necessity for determining the profit or loss derived from each department.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

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This bulletin is a contribution from

Bureau of Agricultural Economics—LLOYD S. TENNY, *Acting Chief.*
Division of Livestock, Meats, and Wool—C. V. WHALIN, *Assistant Chief Marketing Specialist.*

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